

# MINERALS & MINERALS LIMITED

Regd. Office- Court Road, P.O. & Distt.-Lohardaga, Jharkhand-835302

Tel.-06526-223163

CIN NO. U26990JH1970PLC000875

Ref. :

Date .....

M&M/LHD/ENV/MoEF&CC/417

Date: 24<sup>th</sup> November 2025

To,  
The Dy. Director General of Forest (C)  
Ministry of Environment, Forests and Climate Changes  
2nd Floor, Headquarter-Jharkhand State Housing Board  
Harmu Chowk, Ranchi, Jharkhand-834002

**Sub:** Six Monthly EC Compliance Report for Amtipani Chirodih (130.01 Ha) Bauxite Mine of M/s Minerals & Minerals Limited, Gumla Jharkhand for the period from April 2025 to September 2025.

**Ref:** Environmental Clearance letter No. F.No.11015/31/2017-IA-II (M), dated 13<sup>th</sup> August.2021.

Dear Sir,

With reference to the above, we are submitting herewith the Compliance status report of EC conditions for **Amtipani Chirodih Bauxite Mine (130.01 ha)** project of **M/s Minerals & Minerals Limited** located in Gumla, Jharkhand for the period from **April 2025 to September 2025** for your kind perusal please.

The slease detail is as below:

Lease area (ha)	Production Capacity (MT)	Lease Period
130.01	450000	11.01.2017 to 10.01.2067

Hope you will find the same in order.

Thanking You

Yours faithfully,  
For **Minerals & Minerals Limited**



**Basudev Gangopadhyay**  
**AVP (Planning, Environment & Compliance)**

Enclosure: - As Above

CC: [ro.ranchi-mef@gov.in](mailto:ro.ranchi-mef@gov.in), [mef@ori.nic.in](mailto:mef@ori.nic.in), [mef@nic.in](mailto:mef@nic.in), [mef.or@nic.in](mailto:mef.or@nic.in), [mscb.cpcb@nic.in](mailto:mscb.cpcb@nic.in), [zokolkatta.cpcb@nic.in](mailto:zokolkatta.cpcb@nic.in), [ranchijspcb@gmail.com](mailto:ranchijspcb@gmail.com), [roranchi47@gmail.com](mailto:roranchi47@gmail.com)

**Name of the Project** : **Amtipani Chirodih Bauxite Mine (130.01 ha)**  
**M/s Minerals & Minerals Limited,**

**Environment Clearance No & date** : **F.No.11015/31/2017-IA-II (M), dated 13.08.2021.**

**Period of compliance Report** : **From 1<sup>st</sup> April 2025 to 30<sup>th</sup> September 2025**

**Specific Conditions**

**Condition 1-** As per the submission of the PP after the meeting, two alignments have been proposed for the diversion of the road. Alignment 1 will be used for the first three years and will have a protection from the mining area. PP will only do controlled primary blasting to remove Laterite and monitor the vibration and noise at a distance of 100 m towards the roadside to assess any impact of mining. The Alignment 2 will be used after 3 years in the mined out and backfilled area with proper care for subsidence, contraction, and road safety as it has been practiced by same in its other mines.

**Reply to Condition 1-** Presently a separate road has been constructed for evacuation of Bauxite from the mine. Post mining of the present area, the road will be shifted to the mined-out area after proper reclamation. We are only doing controlled blasting to remove hard laterite and Bauxite ore. Vibration and noise monitoring are being monitored during blasting.

**Condition 2-** The road will be divided into two parts. Total width will be 12 m with 1 m median. One half of the road will be exclusively dedicated for the movement of villagers whereas the other half will be used for mining operation.

**Reply to Condition 2-** Agreed. A separate road has been made for movement of villagers and other road is being used for vehicular activities related to mining operations.

**Condition 3-** PP will also submit the cost benefit analysis looking at the reserves and the total excavation proposed which includes 9.47 LTPA of OB/SB/IB (Laterite), 7.74 LTPA of soil and 1.4 LTPA of quarry waste, leaving only 3.10 of Bauxite market grade out of 21.71 LTPA of total excavation.

**Reply to Condition 3-** Agreed. The cost benefit analysis has already been made. The exploration is being carried out and it is completed along with analysis details. Post completion of detail exploration the cost benefit analysis will be made based on Bore holes results. Then it will be further complied as per the condition.

**Condition 4- There is traffic of villagers at NW direction of the mine intersecting many roads. PP should come out with a clear statement of impact on this transport and traffic due to this mine quantifying the social impact on the utilization of road by villagers due to operation of mine.**

**Reply to Condition 4-** Agreed. Impact study due to transport and traffic has been covered in EIA/EMP Report. Continuous water sprinkling on the road is being done to suppress dust emission.

**Condition 5- At the time of revision of the mining plan, PP shall submit the action taken as per the mine closure plan of the previous plan after every 5 years.**

**Reply to Condition 5-** Agreed. Currently no revision of the mining plan has been done yet. Progressive mine closure plan is included in the current mining plan.

**Condition 6- Robust integrated Wildlife Conservation Plan should be prepared for this mine along with other two mines present in the vicinity of this mine.**

**Reply to Condition 6-** Wildlife conservation plan has already been prepared and approved by PCCF, Wildlife, Ranchi. Adjacent two mines namely Kujam-I and Kujam-II have also been prepared WLCP and approved by PCCF, Wildlife, Ranchi via Office Order No. 50 and 51 dated 03.12.2021 for Kujam I and Kujam II Bauxite Mines respectively.

## **Standard Conditions**

### **I. Statutory Compliance**

**Condition 1- This Environmental Clearance (EC) is subject to orders/ judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.**

**Reply to Condition 1- –** Noted. However, common cause conditions are not applicable for this mine.

**Condition 2- The Project proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August,2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors before commencing the mining operations.**

**Reply to Condition 2-** Noted. However, common cause conditions are not applicable for this mine.

**Condition 3- The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of Judgment of Hon'ble Supreme Court dated 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors.**

**Reply to Condition 3-** There had been no illegal mining involved. Hence, there is no demand from the State Government regarding common cause matter for Amtipani Chirodih Bauxite mine.

**Condition 4- This Environmental Clearance shall become operational only after receiving formal NBWL Clearance from MoEF&CC subsequent to the recommendations of the Standing Committee of National Board for Wildlife, if applicable to the Project.**

**Reply to Condition 4-** Noted. However, this mine is located beyond the ESZ boundary. Hence, NBWL Clearance is not applicable for this mine.

**Condition 5- This Environmental Clearance shall become operational only after receiving formal Forest Clearance (FC) under the provision of Forest Conservation Act, 1980, if applicable to the Project.**

**Reply to Condition 5-** Noted. There is no forest area involved within the mining lease. Hence this condition is not applicable.

**Condition 6- Project Proponent (PP) shall obtain Consent to Operate after grant of EC and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent to Establish / Consent to Operate from the concerned State Pollution Control Board/Committee.**

**Reply to Condition 6-** Noted. CTE and CTO have already been received from JSPCB, Ranchi.

**Condition 7- The PP shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Development & Regulation), Act, 2015 and rules & regulations made there under. PP shall adhere to various circulars issued by Directorate General Mines Safety (DGMS) and Indian Bureau of Mines from time to time.**

**Reply to Condition 7-** Noted. All the provisions and regulations made under Mines Act, 1952 and MMDR Act, 2015 and various circulars issued by Directorate General Mines Safety (DGMS) and Indian Bureau of Mines are being adhered to.

**Condition 8- The Project Proponent shall obtain consents from all the concerned landowners, before start of mining operations, as per the provisions of MMDR Act, 1957 and rules made there under in respect of lands which are not owned by it.**


**Reply to Condition 8-**Agreed. Land acquisition for mining purposes is being done with the permission of competent authority of State Government i.e. concerned Deputy Commissioner (D.C.). The land lease agreement is being done with raiyat (Landowner) after permission of State Govt with provision of returning the land as per the norms set by D.C. The compensation and facilities are being provided as per norms set in agreement.

**Condition 9- The Project Proponent shall follow the mitigation measures provided in MoEFCC's Office Memorandum No. Z-11013/57/2014-IA.II (M), dated 29th October 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area."**

**Reply to Condition 9-** Noted and being adhered to.

**Condition 10- The Project Proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and from CGWA for withdrawal of ground water for the project.**

**Reply to Condition 10-** Noted. We have obtained NOC for withdrawal of groundwater from CGWA/CGWB for drinking purposes only. The scan copy of the same NOC is attached below.



भारत सरकार  
जल शक्ति मंत्रालय  
जल संसाधन, नदी विकास  
और गंगा संरक्षण विभाग  
केन्द्रीय भूमि जल प्राधिकरण  
Government of India  
Ministry of Jal Shakti  
Department of Water Resources,  
River Development & Ganga Rejuvenation  
Central Ground Water Authority

(भूजल निकासी हेतु अनापत्ति प्रमाण पत्र)  
**NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION**

Project Name:		Amtipani Chirodih Bauxite Mine (130.01 Ha)	
Project Address:		Amtipani Chirodih Bauxite Mine, Mauza -chirodih, P S - Gumla,, District - Gumla	
Village:	Chirodih	Block:	Bishunpur
District:	Gumla	State:	Jharkhand
Pin Code:			
Communication Address:		Minerals Minerals Ltd, Court Road Lohardaga, Lohardaga, Jharkhand, Lohardaga, Lohardaga, Jharkhand - 835302	
Address of CGWB Regional Office :		Central Ground Water Board Mid Eastern Region, 6th & 7th Floor, Lok Nayak Jai Prakash Bhawan, Frazer Road Dak Banglow, Patna, Bihar - 800011	
1. NOC No.:	CGWA/NOC/MIN/REN/1/2024/9802	2. Date of Issuance	01/08/2024
3. Application No.:	21-4/914/JH/MIN/2022	4. Category: (GWRE 2023)	Safe
5. Project Status:	Existing Ground Water	6. NOC Type:	Renewal
7. Valid from:	31/08/2024	8. Valid up to:	30/08/2026
9. Ground Water Abstraction Permitted:			
Fresh Water		Dewatering	
m <sup>3</sup> /day	m <sup>3</sup> /year	m <sup>3</sup> /day	m <sup>3</sup> /year
9.50	3467.50		

NOC for Ground Water

**Condition 11-** A copy of EC letter will be marked to concerned Panchayat / local NGO etc. if any, from whom suggestion / representation has been received while processing the proposal.

**Reply to Condition 1-** Complied. A copy of the clearance letter has already been submitted to Gram Panchayat Mukhiya. Acknowledgment copy of the same is attached herewith as **Annexure 8**.

**Condition 12-** State Pollution Control Board/Committee shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector's office/ Tehsildar's Office for 30 days.

**Reply to Condition 12-** Complied. The EC Letter has been submitted to JSPCB for display of same at its Regional office and other government offices.

**Condition 13-** The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board/Committee and web site of the Ministry of Environment, Forest and Climate Change ([www.parivesh.nic.in](http://www.parivesh.nic.in)). A copy of the advertisement may be forwarded to the concerned MoEFCC Regional Office for compliance and record.

**Reply to Condition 13-** Noted and complied. The information on grant of the EC has been published in two local newspapers. The copy of the advertisement has already been submitted to the Regional Office of the MoEF&CC. Now, the Regional office of MoEF&CC is in Ranchi.

**Condition 14-** The Project Proponent shall inform the MoEF&CC for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.

**Reply to Condition 14-** Noted and will be informed if applicable.

## **II. Air quality monitoring and preservation**

**Condition 1-** The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining

operations, of air pollution viz. PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>2</sub>, CO and SO<sub>2</sub> etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office buildings, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.

**Reply to Condition 1-** We have already established four ambient air quality monitoring stations in the core zone as well as the buffer zone. Monitoring is being carried out and reported to the concerned authorities. Monitoring Report is attached as **Annexure 2**. Digital display board is already installed in front of mine gate office. We have already installed an online PM10 analyzer at mine site.

**Condition 2-** Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metaled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM<sub>10</sub> and PM<sub>2.5</sub> are evident such as haul road, loading and unloading point and transfer points. Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipment/ machineries and preventive maintenance. Use of suitable water soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. It shall be ensured that air pollution level confirm to the standards prescribed by the MoEFCC/ Central Pollution Control Board.

**Reply to Condition 2-** Continuous water sprinkling is being done for dust suppression on haul road. Online PM10 analyser has been installed for regular monitoring purposes. Suitable water-soluble chemical dust suppressing agents will be used in future if required. The photograph of Water Sprinkler is already attached below.



Mobile Water Tanker with Sprinkling Facilities.

### **III. Water quality monitoring and preservation**

**Condition 1-** In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEFCC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.

**Reply to Condition 1-** Noted. Shallow depth mining is being carried out in the Mine. Therefore, Mining operation does not involve intersection of ground water table. However, we are regularly monitoring the ground water table through installation of piezometer. The copy of the same report is attached herewith as **Annexure 1**.

As the water table is not intersecting during mining operation, the detailed hydro-geological study is not applicable for this mine.

**Condition 2-**Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintained. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water tables in open dug walls located in village should be incorporated to ascertain the impact of mining over ground water table. The Report on changes in Ground water level and quality shall be submitted on a six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department/ State Pollution Control Board.

**Reply to Condition 2-** Noted. Regular monitoring of drinking water and stream/spring water are being carried out. As shallow depth mining is being carried out, hence there is no intersection of ground water table during the mining operation at present and in future. A piezometer has been installed in mine for monitoring of ground water level. Drinking water is being provided to nearby villages regularly.

The ground water level and water quality reports are being sent regular to regional office of Ministry, CGWA and JSPCB. The same are attached herewith as **Annexure 1 & 2**.

**Condition 3-** Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department. The Report on changes in Ground water level and quality shall be submitted on six monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department/ State Pollution Control Board.



**Reply to Condition 3-** We are not using ground water for any mining purposes. Shallow depth mining is being carried out, hence there is no intersection of ground water table during the mining operation at present and in future. A piezometer has been installed for monitoring of ground water level. The ground water level and water quality reports are being sent regular to regional office of Ministry, CGWA and JSPCB. The same are attached herewith as **Annexure 1 & 2**.



Piezometer at Amtipani Chirodih Mine

**Condition 4-** The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby/ adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carry out regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-a vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEFCC. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on a six-monthly basis.

**Reply to Condition 4-** Regular monitoring of water quality parameters of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease is being carried. There are no water courses / bodies existing in the mining lease area. No natural water bodies are being / will be obstructed due to any mining operations. Monitoring Reports are being sent regular to regional office of Ministry, CGWA and JSPCB on six-monthly basis. The same are attached herewith as **Annexure 2**.

**Condition 5-** Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J- 20012/1/2006-IA.II (M) dated 27.05.2009 issued by the Ministry of Environment, Forest and Climate Change may also be referred in this regard.

**Reply to Condition 5-** There is no polluted water generated during mining operations of this mine.

**Condition 6-** Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Groundwater Department. A report on the amount of water recharged needs to be submitted to the Regional Office MoEFCC annually.

**Reply to Condition 6-** A rainwater-harvesting pond with proper fencing has already been constructed on a long-term basis to augment groundwater in the area, in consultation with the Central Ground Water Board. Photographs of the same are attached below. The total groundwater recharge is 3,354 m<sup>3</sup>/annum.



**Condition 7- Industrial wastewater (workshop and wastewater from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.**

**Reply to Condition 7-** No wastewater is generated from our mining operation. However, only negligible amount of effluent is being generated from workshop and Oil & grease trap system is already installed for treatment of this effluent. The treated water is in close circuit and being reused for washing of vehicle in the workshop. We are not discharging any wastewater outside the mine lease area.

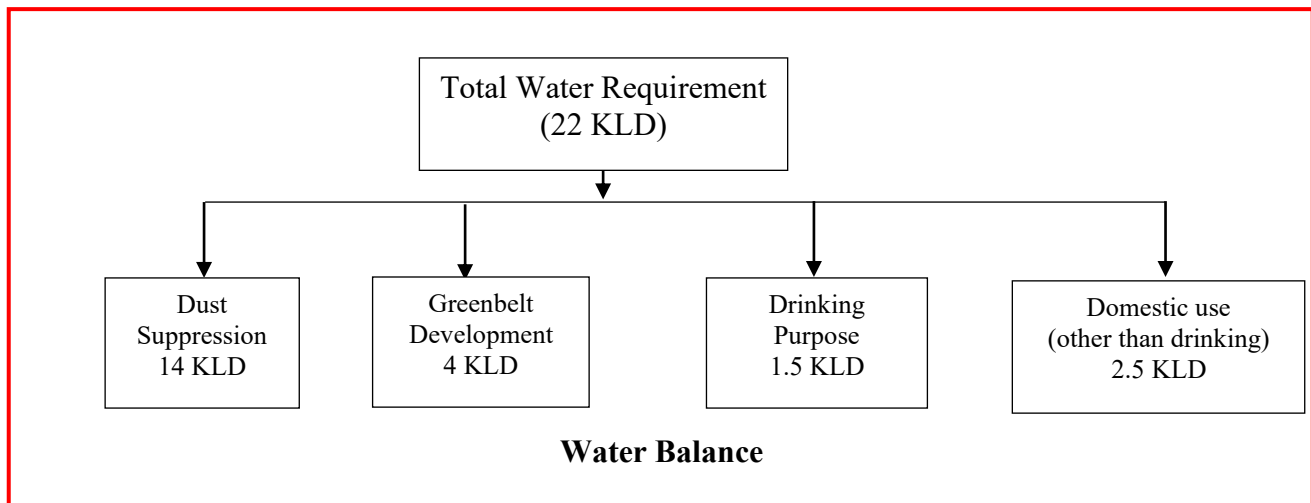
Furthermore, the quality of this treated water is being monitored regularly and the monitoring report is enclosed herewith as **Annexure 2**.



Washing Ramp with Oil and Grease trap

**Condition 8-The water balance/water auditing shall be carried out and measures for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board/Committee.**

**Reply to Condition 8-** Noted. The water balance for this mine is attached below. We are taking water from a rainwater harvesting pond located at our adjacent mine namely Kujam-II for sprinkling and other activities. However, we have obtained NOC from CGWA for drinking purposes only.



#### **IV. Noise and Vibration monitoring and prevention**

**Condition 1-** The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines. Photo attached below for your kind reference.

**Reply to Condition 1-** Noted and is being adhered to. Blast vibration monitoring is being carried out periodically as per guidelines of DGMS and the report is attached herewith as **Annexure 7**.

**Condition 2-** The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limit for day/night hours.

**Reply to Condition 2-** Noted. Mining operation is restricted to daytime only. So, there is no disturbance created in the nearby villages regarding illumination and sound.

**Condition 3-** The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The workers engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personnel, including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that workers/ personals/ laborers are working without personal protective equipment.

**Reply to Condition 3-** Noted. The noise level monitoring is being conducted at a regular interval. The noise level is below the prescribed norms. Report has been attached as **Annexure 2**. All workers engaged in operation have been provided with PPEs. Training in Health and safety is being imparted by the respective officials.

## **V. Mining plan**

**Condition 1-** The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, over burden, inter burden and topsoil etc. No change in basic mining proposal like mining technology, total excavation, mineral & waste production, lease area and scope of working (viz. method of mining, overburden & dump management, O.B & dump mining, mineral transportation mode, ultimate depth of mining etc.) shall not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form to Short Term Permit (STP), Query license or any other name.

**Reply to Condition 1-** Noted and being adhered.

**Condition 2-** The Project Proponent shall get the Final Mine Closure Plan along with Financial Assurance approved from Indian Bureau of Mines/Department of Mining & Geology as required under the Provision of the MMDR Act, 1957 and Rules/ Guidelines made there under. A copy of the approved final mine closure plan shall be submitted within 2 months of the approval of the same from the competent authority to the concerned Regional Office of the Ministry of Environment, Forest and Climate Change for record and verification.

**Reply to Condition 2-** Noted and will be adhered in due course.

**Condition 3-** The land-use of the mine lease area at various stages of the mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis a-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEFCC and its concerned Regional Office.

**Reply to Condition 3-** Noted and being adhered to. The mine has been started recently and Greenbelt development & plantation work have been started. The excavated area is being back

filled concurrently and back filled area is being used for afforestation/agricultural activity as required. Monitoring and management of rehabilitated areas is continuing through supervision.



Reclaimed Area

## VI. Land reclamation

**Condition 1-** The Overburden (O.B.) generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by D.G.M.S w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of topsoil/OB dumps. The topsoil shall be used for land reclamation and plantation.

**Reply to Condition 1-** Overburden is being used for concurrent backfilling, and topsoil is being spread on the backfilled area for reclamation and plantation.

This mine has been started recently. Therefore, the present OB dump site is temporary in nature. The mining is being carried out as per the approved mining plan by IBM and the guidelines/circulars issued by DGMS with respect to safety in mining operations is being adhered to. Monitoring and management of rehabilitated areas is being done through effective supervision. Data pertaining to backfilling is enclosed as **Annexure 4**.



**Condition 2-** The reject/waste generated during the mining operations shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.

**Reply to Condition 2-** Overburden and waste rock are being used for concurrent backfilling, and topsoil is being spread on the backfilled area for reclamation as per mining plan approved by IBM. All Safety measures are being adhered to the guidelines/circulars issued by DGMS. Monitoring and management of rehabilitated areas is being done through effective supervision. Data pertaining to backfilling is enclosed as **Annexure 4**.

**Condition 3-** The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan.

**Reply to Condition 3-** Mining is in progress. The land reclamation of OB dumps is being done after concurrent backfilling as per approved mining plan in scientific manner. Photographs of the same is attached below.



Reclaimed Area

**Condition 4-** The slope of dumps shall be vegetated in a scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in adaptation of plant species to the

**microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners/ Bentonite etc. shall be undertaken for stabilization of the dump.**

**Reply to Condition 4-** Noted. The OB dump currently present at site is temporary and kept in adherence with DGMS guidelines. However, Overburden and waste rock is being used for concurrent back filling.

**Condition 5-** The Project Proponent shall carry out slope stability study in case the dump height is more than 30 meters. The slope stability report shall be submitted to concerned regional office of MoEF&CC concerned.

**Reply to Condition 5-** Noted. The OB dump currently present is temporary in nature and its height is not more than 30 m. However, it is currently being used for concurrent backfilling as per the approved mining plan. Therefore, this condition is not applicable for this mine.

**Condition 6-** Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and Topsoil/OB/Waste dumps to prevent run off of water and flow of sediments directly into the water bodies (Nallah/ River/ Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be de silted regularly, particularly after monsoon season, and maintained properly.

**Reply to Condition 6-** Noted. Garland drains of appropriate size are being constructed in both areas around the mine pit to prevent runoff of water and flow of sediments directly into the agricultural field and water bodies, if applicable. Sumps of adequate capacity are provided and maintained as required.



Garland drains around Mine Pit



**Condition 7- Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at the corners of the garland drains.**

**Reply to Condition 7-** Noted. Catch drains, Garland drains of appropriate size are being constructed in both around the mine pit to prevent runoff of water and flow of sediments directly into the agricultural field and water bodies, if applicable.

**Condition 8- The topsoil, if any, shall temporarily be stored at earmarked site(s) within the mine lease only and should not be kept unutilized for long. The physical parameters of the topsoil dumps like height, width and angle of slope shall be governed as per the approved Mining Plan and as per the guidelines framed by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of dumps. The topsoil shall be used for land reclamation and plantation purposes.**

**Reply to Condition 8-** Noted. Topsoil is stored in an appropriate way within mine lease as per guidelines of DGMS. Concurrent backfilling process is adopted and topsoil is being spread on the backfilled area for reclamation and plantation purposes.

## **VII. Transportation**

**Condition 1- No Transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, PP shall construct a 'bypass' road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation. with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centers.**

**Reply to Condition 1- -** Haul Road has been constructed for transportation of minerals. Mobile water tankers with sprinkling facilities have been provided along-haul roads, loading, unloading & at transfer points to arrest dust emission. Regular maintenance of vehicles is undertaken to minimize

vehicular emission. All measures are being taken to control vehicular emission. The vehicles are being covered with tarpaulin while transportation of mineral. Photographs of Tarpaulin covered Truck and PUC Certificates are attached below:



Tarpaulin covered truck for transportation of bauxite.

Pollution Control Certificate													
Issued by: Government of Jharkhand													
Date:	22/09/2020												
Time:	12:12:33 AM												
Validity upto:	12/12/2020												
Vehicle No.:	JH-54-2001134												
Registration No.:	JH-54-2001134												
Owner Name:	Shri. S. S. S. S.												
Vehicle Type:	Light Motor Vehicle												
Engine No.:	10000000000000000000												
Chassis No.:	10000000000000000000												
PUC Code:	10000000000000000000												
Remarks:	Vehicle is in good condition and meets the required standards.												
<table border="1"> <thead> <tr> <th>By No.</th> <th>Signature</th> <th>Signature</th> <th>Signature</th> <th>Signature</th> <th>Signature</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> </tr> </tbody> </table>		By No.	Signature	Signature	Signature	Signature	Signature	1	2	3	4	5	6
By No.	Signature	Signature	Signature	Signature	Signature								
1	2	3	4	5	6								
<p>This PUC certificate is valid for the period of 12 months from the date of issue and is subject to the condition that the vehicle is maintained in good condition and meets the required standards.</p>													

PUC Certificate

**Condition 2-** The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipment's like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.

**Reply to Condition 2-** Noted. Haul road has been constructed for transportation of minerals. Mobile water tankers with sprinkling facilities have been provided on haul roads, loading, unloading & at transfer points to suppress the dust emission. The Photograph of Water sprinkler is attached below:



Mobile Water Tanker with Sprinkling Facilities

## VIII. Greenbelt

**Condition 1-** The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Greenbelt shall be developed within first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.

**Reply to Condition 1-** The mine has been started recently, and Greenbelt development & plantation work have been started. During FY 2025-26 till September, a total of 6510 nos. saplings have been planted in the mining premises. Cumulative 6.11 ha areas have been planted till date. Green belt development work is also being carried out in safety zone of mining lease. Plantation work is being governed as per approved mining plan and as per EC conditions.



Plantation activities

**Condition 2-** The Project Proponent shall carryout plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development department/ Tribal Welfare Department/ Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered to. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for the protection and care of trees.



**Reply to Condition 2 -** Noted. The mine has been started recently, and greenbelt development and plantation work have commenced. These activities are being carried out in and around the mining lease area, reclaimed areas, etc., in consultation with the local forest department. Roadside plantation has also been undertaken.

During FY 2025-26 till September, a total of 6510 nos. saplings have been planted in the mining premises. Cumulative 6.11 ha areas have been planted till date.



Roadside Plantation.



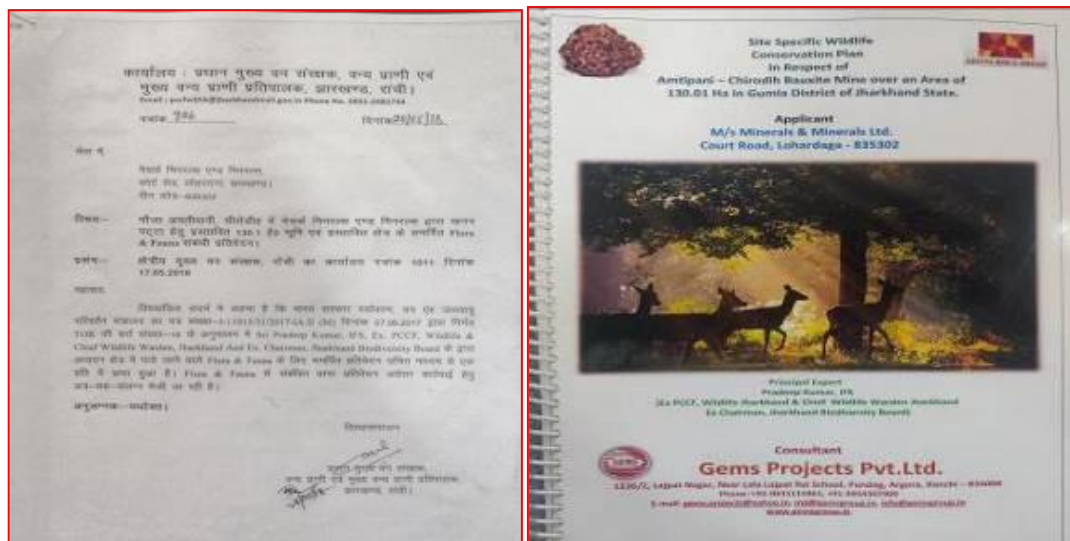
Plantation and Agricultural activities

**Condition 3 -** The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensating those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide midday shelter from the scorching sun, should be scrupulously guarded/ protected against felling and plantation of such trees should be promoted.

**Reply to Condition 3-** As per the agreement by DC, we are acquiring land on the lease basis in consultation with the State Government and with the consent of the landowner. After completing mining operation followed by reclamation and topsoil spreading, we return the land to the landowners for agriculture purpose or plantation whichever is desired by them (landowners /villagers). Hence, we do not deteriorate the quality of the land and there is no need to create grazing land. No cutting of trees/ felling of trees are involved in the mining process.

**Condition 4- The Project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-I species during mining operation. A Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wildlife Warden of the State Govt.**

**Reply to Condition 4-** We have prepared Wildlife Conservation Plan in consultation with State Forest Department and also obtained approval letter from Principal Chief Conservator of Forest, Wildlife & Chief Wildlife Warden, Jharkhand for conservation and protection of flora and fauna in the core and buffer zone. However, this Mine is located outside the eco-sensitive zone.



Site Specific Wildlife Conservation Plan

**Condition 5- And implemented in consultation with the State Forest and Wildlife Department. A copy of the Wildlife Conservation Plan and its implementation status (annual) shall be submitted to the Regional Office of the Ministry.**

**Reply to Condition 5 –** Noted and complied with. A Site-Specific Wildlife Conservation Plan (WLCP) has been prepared in consultation with the State Forest Department and approved by the PCCF (Wildlife), Jharkhand. As per the approved WLCP, we receive a demand note from the DFO each year and make the corresponding payment accordingly. A copy of the latest payment receipt is enclosed herewith as **Annexure-10**.

## **IX. Public hearing and human health issues**

**Condition 1-** The Project Proponent shall appoint an Occupational Health Specialist for Regular as well as Periodical medical examination of the workers engaged in the mining activities, as per the DGMS guidelines. The records shall be maintained properly. PP shall also carry out Occupational health check-ups in respect of workers which are having ailments like BP, diabetes, habitual smoking, etc. The check-ups shall be undertaken once in six months and necessary remedial/ preventive measures be taken. A status report on the same may be sent to MoEFCC Regional Office and DGMS on a half-yearly basis.

**Reply to Condition 1-** Noted and being complied. Regular and periodical medical examination of the workers engaged in the project is being carried out and records are being maintained by the Medical Officer. IME/PME record is attached herewith as **Annexure 6**.

**Condition 2-** The Project Proponent must demonstrate commitment to work towards 'Zero Harm' from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazards and assess their potential risks to health and determine appropriate control measures to protect the health and wellbeing of workers and nearby community. The proponent shall maintain accurate and systematic records of the HRA. The HRA for neighborhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV, Anaemia, Diarrhoea in children under five, respiratory infections due to biomass cooking. The proponent shall also create awareness and educate the nearby community and workers for Sanitation, Personal Hygiene, Hand washing, not to defecate in open, Women Health and Hygiene (Providing Sanitary Napkins), hazard of tobacco and alcohol use. The Proponent shall carry out base line HRA for all the categories of workers and thereafter every five years.

**Reply to Condition 2** – Regular awareness programs are conducted to educate the local community on healthcare, sanitation, hygiene, and related topics. We organized an awareness drive on heat waves in and around operational areas and distributed ORS packets to workers and staff. "Poshan Kits" were distributed to TB patients to enhance their nutrition and support recovery. Rural medical camps are organized regularly.

Additionally, awareness programs are regularly provided to local villagers, focusing on women's health and hygiene, as well as the hazards of tobacco and alcohol use.

All workers and company staff are provided with appropriate PPE. We also conduct regular IMEs (Initial Medical Examinations) and PME (Periodic Medical Examinations) to ensure the health and well-being of workers in the mines.





Medical Camp and Awareness Programme in nearby Schools and Villages

**Condition 3 - The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigations relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise Audiometric; for Lead Exposure Blood Lead, For Welders Full Ophthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist, and Manganese (Mn) Estimation in Blood; For Inorganic Chromium- Fortnightly skin inspection of hands and forearms by a responsible person. Except routine tests all tests would be carried out in a Lab accredited by NABH. Records of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos, Hard Rock Mining, Silica, Gold, Kaolin, Aluminium, Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X-Ray. Only conventional X-Ray will be accepted for recording purposes and not the digital one). X-Ray must meet ILO criteria (17 x14 inches and of good quality).**

**Reply to Condition 3-** Occupational health surveillance is being conducted in regular intervals by specialized doctors and nurses. Rural medical camps are being organized every Friday. Periodical medical examination of the workers engaged in the project is being carried out and records are being maintained by Medical Officer. IME/PME record is attached in compliance report as Annexure 6.

**Condition 4- The Proponent shall maintained a record of performance indicators for workers which includes (a) there should not be a significant decline in their Body Mass Index and it should stay between 18.5 -24.9, (b) the Final Chest X-Ray compared with the base line X-Ray should not show any capacities ,(c) At the end of their leaving job there should be no Diminution in their Lung Functions Forced Expiratory Volume in one second (FEV1),Forced Vital Capacity (FVC), and the ratio) unless they are smokers which has to be adjusted, and the effect of age, (d) their hearing should not be affected. As a proof an Audiogram (first and last need to be presented), (e) they should not have developed any Persistent Back Pain, Neck Pain, and the movement of their Hip, Knee and other joints should have normal range of movement, (f) they should not have suffered loss of any body part. The record of the same should be submitted to the Regional Office, MoEFCC annually along with details of the relief and compensation paid to workers having the above indications.**

**Reply to Condition 4-** Noted and being complied with. However, Regular, and periodical medical examination of the workers engaged in the project is being carried out and records are being maintained. IME/PME record is attached in compliance report as Annexure 6.

**Condition 5- The Project Proponent shall ensure that Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.**



**Reply to Condition 5-** Personnel working in dusty areas are provided with proper respiratory devices. Regular training is being conducted on occupational health and work safety environments.

**Condition 6-** Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project-related infrastructure. The domestic wastewater should be treated with STP in order to avoid contamination of underground water.

**Reply to Condition 6-** Rest shelters with safe drinking water, medical health care have been provided to workers/ laborers. As most of the workers/ laborers are from local villages, there is no need for labor camps

**Condition 7-** The activities proposed in the Action plan prepared for addressing the issues raised during the Public Hearing shall be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame. The Status Report on implementation of Action Plan shall be submitted to the concerned Regional Office of the Ministry along with District Administration.

**Reply to Condition 7-** Noted. The issues raised during the Public Hearing is being implemented as per the budgetary provisions.

## **X. Corporate Environmental Responsibility (CER)**

**Condition 1-** The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 or as proposed by EAC should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual report of implementation of the same along with documentary proof viz. photographs, purchase documents, latitude & longitude of infrastructure developed & road constructed needs to be submitted to Regional Office MoEF&CC annually along with audited statement.

**Reply to Condition 1-** Every year, the funds earmarked for corporate environmental responsibility is being budgeted separately and its expenditure is being reported to the regional office of Ministry. The copy of the same is attached as **Annexure 5**.

**Condition 2-** Project Proponent shall keep the funds earmarked for environmental protection measures in a separate account and refrain from diverting the same for other purposes. The

**Year wise expenditure of such funds should be reported to the MoEFCC and its concerned Regional Office.**

**Reply to Condition 2** Every year, the funds earmarked for environmental protection measures is being budgeted separately and its expenditure is being reported to the regional office of Ministry. The copy of the same is attached as **Annexure 5**.

## **XI. Miscellaneous**

**Condition 1- The Project Proponent shall prepare a digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEF&CC.**

**Reply to Condition 1-** Noted and will be complied with. However, Digital Map of land use and land cover is being prepared every year and is being submitted to IBM Ranchi. The same is attached herewith as **Annexure 9**.

**Condition 2-The Project Authorities should inform the Regional Office regarding the date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.**

**Reply to Condition 2 –** This is an operative mine hence provision related to financial closure is not applicable.

**Condition 3 - The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MOEFCC & it concerned Regional Office, Central Pollution Control Board and State Pollution Control Board**

**Reply to Condition 3-** Six monthly reports on the status of the EC are being submitted regularly.

**Condition 4- A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEFCC**

**Reply to Condition 4-** A separate environmental management cell with suitable qualified personnel has been set up under the control of a Senior Executive, who is reporting directly to the Head of the Organization. The same is being attached herewith as **Annexure 3**.

**Condition 5-** The concerned Regional Office of the MoEFCC shall randomly monitor compliance with the stipulated conditions. The project authorities should extend full cooperation to the MoEFCC officer(s) by furnishing the requisite data/ information/ monitoring reports.

**Reply to Condition 5-** Noted and Agreed.

**Condition 22-** The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

**Reply to Condition 22-** Noted.

**Condition 23-** Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attracts action under the provisions of Environment (Protection) Act, 1986.

**Reply to Condition 23-** Noted.

**Condition 24-** The above conditions will be enforced inter-alia, under the provisions of the water (prevention & control of pollution) Act, 1981 the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/High Court and any other Court of law relating to the subject matter.

**Reply to Condition 24-** Noted.

**Condition 25-** Any appeal against the environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under section 16 of the National Green Tribunal Act, 2010.

**Reply to Condition 25-** Noted.

**Condition 26-** The issue with the approval of competent Authority.

**Reply to Condition 26-** Noted.

**Piezometer Monitoring Report**

**Mine: Amtipani Chirodih Bauxite Mine (130.01 Ha)**

<b>S No</b>	<b>Month</b>	<b>Ground Water Level (BGL) in meter</b>
1	<b>Apr-25</b>	<b>31.45</b>
2	<b>May-25</b>	<b>31.62</b>
3	<b>Jun-25</b>	<b>32.54</b>
4	<b>Jul-25</b>	<b>31.92</b>
5	<b>Aug-25</b>	<b>31.21</b>
6	<b>Sep-25</b>	<b>31.09</b>







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CIN:-Q748880K2022PTC019685 Accredited by:-

AN-14H123671M

GST:-25AAHCE3651M129

(Ranchi) State Pollution Control Board

Certified by:-

ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0153251752	Group	Atmospheric Pollution
Issue date/time	29.04.2025/ 10:44	Sub Group	Ambient Air Quality

Report Issue to		Contact Person	Mr. Ankit Das
M/s - MINERALS & MINERALS LIMITED		Contact Number	+91 9971034775
VILLAGE-COURT ROAD,		Email Id	ankit.das@adityabirla.com
POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA,		Order Date	05.04.2025/ 10:10
STATE-JHARKHAND, INDIA 835302		Order Number	RP/MJB/MM/25/0114/00
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE			

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0153	Sample Booking Number	EPIC- 251752
Sample(s) Code	251752 (A) (B) (C) (D)	Sample Receipt (D/T)	24.04.2025/10:15

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Sampling Start (D/T)	22.04.2025/ 11:42	Sampling End (D/T)	23.04.2025/ 08:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Karan Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	29	Humidity %	51	Wind direction	270°-90°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Site (Amtipani Chirodih Bauxite Mine)	GPS coordinate	23° 20' 32.13" / 84° 17' 29.11"
S. Location B	Weigh Bridge (Amtipani Chirodih Bauxite Mine)	GPS coordinate	23° 21' 08.52" / 84° 17' 21.05"
S. Location C	Mine Office (Amtipani Chirodih Bauxite Mine)	GPS coordinate	23° 21' 10.37" / 84° 17' 15.52"
S. Location D	Entrance Gate (Amtipani Chirodih Bauxite Mine)	GPS coordinate	23° 21' 30.01" / 84° 17' 27.14"

### Date(s) of performance of the laboratory activities

Test start date	24.04.2025/ 11:10	Test completion date	28.04.2025/ 16:40
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### --Test Result --

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C <sub>6</sub> H <sub>6</sub> )	IS:5182(P-11) 2006	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:5182(P-12) 2004	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01/00	mg/m <sup>3</sup>	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

### --Test Result End --

Prescribed Limit	Environmental (Protection) Rules-1986, Schedule VII.
------------------	--

Operational Status	Unit was Operational During sampling.
--------------------	---------------------------------------

Analysed by - L.C.Das



Checked by  
(S.S. Kumar)  
Technical Head

Verified & Issue by  
(Ankit Das)  
Laboratory Head  
Ankit Das  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



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CIN:-U47999JH2022PTC012685

PAN:-RANICE3011M

GST:-20AAHCE3811M1U2X

Accredited by:-

NABL, Item Certificate Number TC- 52887

Jharkhand State Pollution Control Board

Certified by:-

ISO 9001:2015 and ISO 45001:2018



TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000422	Discipline	Chemical
Report Unique ID	RL0153251753	Group	Water
Issue date/time	29.04.2025/ 10:46	Sub Group	Drinking Water

Report Issue to		Contact Person	Mr. Ankit Das
M/s - MINERALS & MINERALS LIMITED		Contact Number	+91 9971034775
VILLAGE-COURT ROAD,		Email Id	ankit.das@adityabirla.com
POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA,		Order Date	05.04.2025/ 10:10
STATE-JHARKHAND, INDIA 836302		Order Number	RP/MJB/MM/25/0114/00
MONITORING SITE:AMTIPANI CHIRODIH 130.01 BAUXITE MINE			

References of Quality Management System (Steps of Traceability Chain)			
Customer Registration No.	EPIC/OTH/0153	Sample Booking Number	EPIC-251753
Sample(s) Code	251753	Sample Receipt (D/T)	24.04.2025/10:19

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/038
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Sampling Start (D/T)	22.04.2025/ 15:00	Sampling End (D/T)	22.04.2025/ 15:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Karan Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling			
Weather condition	Clear	Temperature (°C)	29
		Humidity %	51
		Wind direction	270°-90°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Office	GPS coordinate	23° 21' 10.03"/84° 17' 14.82"

Data(s) of performance of the laboratory activities			
Test start date	24.04.2025/ 10:40	Test completion date	28.04.2025/ 14:00

### --Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible Limit
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	6.77	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.39	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	<5	5	15
4.	Odour	IS 3025 (P-05) 2018	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	98.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	19.71	250	1000
8.	Total Alkalinity(as CaCO <sub>3</sub> )	IS 3025 (P-23) 2019	mg/l	58.00	200	600
9.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21) 2009	mg/l	84.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	18.44	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	BDL(MDL-0.4)	0.2	1
12.	Sulphate (as SO <sub>4</sub> )	IS 3025 (P-24/Sec-1)2022	mg/l	1.60	200	400
13.	Nitrate (as NO <sub>3</sub> )	APHA 4500 B 2023	mg/l	0.96	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL(MDL-0.001)	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	9.23	30	100





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CIN: U74999JH2022PT10010445

PAN: AAMCE08YM

GST: 28AAICE367M12X

Accredited by:-

NABL Lab Certificate Number LC-1387

Jharkhand State Pollution Control Board

Certified by:-

ISO 9001:2015 and ISO 15189:2013



TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000422	Discipline	Chemical
Report Unique ID	RL0153251753	Group	Water
Issue date/time	29.04.2025/ 10:48	Sub Group	Drinking Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED

VILLAGE-COURT ROAD,

POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA,

STATE-JHARKHAND, INDIA 835302

MONITORING SITE:AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person

Mr. Ankit Das

Contact Number

+91 9971034775

Email Id

ankit.das@adityabirla.com

Order Date

05.04.2025/ 10:10

Order Number

RP/MJB/MM/25/0114/00

### Group-Residues and Contaminants in Water

### Sub Group- Trace Metals Elements

16. Copper(as Cu)	APHA 3111 B 2023	mg/l	BDL(MDL-0.2)	0.05	1.5
17. Iron (as Fe)	APHA 3111 B 2023	mg/l	BDL(MDL-0.1)	1.0	No relaxation
18. Lead (as Pb)	APHA 3111 B 2023	mg/l	BDL(MDL-0.01)	0.01	No relaxation
19. Cadmium (as Cd)	APHA 3111 B 2023	mg/l	BDL(MDL-0.003)	0.003	No relaxation
20. Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	BDL(MDL-0.05)	0.05	No relaxation
21. Nickel (as Ni)	APHA 3111 B 2023	mg/l	BDL(MDL-0.02)	0.02	No relaxation
22. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	0.05
23. Selenium (as Se)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	No relaxation
24. Manganese (as Mn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.00)	0.1	0.3
25. Zinc(as Zn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.04)	5	15

—Test result End—

Prescribed Limit

IS 10500:2021

Operational Status

Unit was Operational During sampling

Analysed by -Pratima Kumar/ Anjali Kumar



Checked by  
(B.N. Kumar)  
Technical Head

Verified & Issued by  
(Umash Das)  
Laboratory Head

EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





# EPIC LabTech Private Limited

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Tel: 9831 4668392

98357 86677

93840 72294

epiclabtech@gmail.com

CIN: U24309JH2022PTC019683

PAN: AAHCE011M

GST: 22AAHCE011M12X

Accredited by:-

Indian State Pollution Control Board

Certified by:-

ISO 9001:2015 and ISO 19001:2015

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0153251753	Group	Water
Issue date/time	29.04.2025/ 10:46	Sub Group	Drinking Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD,  
POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA,  
STATE-JHARKHAND, INDIA 835302  
MONITORING SITE :AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person  
Contact Number  
Email Id  
Order Date  
Order Number

Mr. Ankit Das  
+91 9971034775  
ankit.das@adityabirla.com  
05.04.2025/ 10:10  
RP/MUB/MM/25/0114/00

### References of Quality Management System (Days of Traceability Data)

Customer Registration No.	EPIC/OTH/0153	Sample Booking Number	EPIC-251753
Sample(s) Code	251753	Sample Receipt (D/T)	24.04.2025/10:19

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS : 3025 (Part-1) 1987, R-2003	Sampling End (D/T)	22.04.2025/ 15:15
Sampling Start (D/T)	22.04.2025/ 15:00	Sample collected by	Mr. Karan Kumar & Team
Mode of Sampling	Conducted by Laboratory		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	29	Humidity %	51	Wind direction	270°-90°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Office	GPS coordinate	23° 21' 10.03" / 84° 17' 14.82"
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### Data(s) of performance of the laboratory activities

Test start date	24.04.2025/ 10:40	Test completion date	26.04.2025/ 14:00
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### --Test Result --

Sl	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible Limit
1.	Fluoride (as F)	APHA 4500 F-C 2023	mg/l	BDL(MDL-0.1)	1.0	1.5
Group-Residues and Contaminants in Water					Sub Group-Trace Metals Elements	
2.	Aluminum	IS 3025 (P-55):2019	mg/l	BDL(MDL-0.1)	0.03	0.2
3.	Boron	IS 3025 (P-57):2021	mg/l	BDL(MDL-0.1)	0.5	1.0
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	0.5	No relaxation
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	0.1	No relaxation
Group-Residues and Contaminants in Water					Sub Group-Pesticides	
6.	Alachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	20	No relaxation
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
8.	Dieldrin	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.03	No relaxation
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.005)	0.01	No relaxation
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	125.0	No relaxation
12.	Chlorpyrifos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	30.0	No relaxation
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	3.0	No relaxation



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☎ 98357 86877  
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✉ epiclabtech@gmail.com

CIN - U14999JH2022PTC009485  
PAN - AAKC2551M  
GST - 20AAACE5611M1Z3

Accredited by -  
Jharkhand State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0153251753	Group	Water
Issue date/time	29.04.2025/ 10:48	Sub Group	Drinking Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD,  
POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA,  
STATE-JHARKHAND, INDIA 835302  
MONITORING SITE :AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person  
Contact Number  
Email Id  
Order Date  
Order Number

Mr. Ankit Das  
+91 9971034775  
ankit.das@adityabirla.com  
05.04.2025/ 10:10  
RP/MJB/MM/25/0114/00

15.	Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
16.	Malathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	190.0	No relaxation
17.	Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	0.3	No relaxation
18.	Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	1.0	No relaxation
19.	Phorate	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
20.	DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	1.0	No relaxation
21.	Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	0.4	No relaxation

—Test Result End—

Prescribed Limit  
Operational Status  
Analysed by -Prokash Kumar/ Anjali Kumar

IS 10500:2021  
Unit was Operational During sampling.



Checked by  
(B.N. Kumar)  
Technical Head

Verified & Issued by  
(Umesh Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
(Prokash Kumar)





# EPIC LabTech Private Limited

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Jharkhand - 254003, India

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☎ 98357 89677  
☎ 93049 72994  
✉ epiclabtech@gmail.com

CIN: U74900/JH2022PTC018683 Accredited by -  
PAN: AAHCE3610M Jharkhand State Pollution Control Board  
GST: 28AAHCE3610M1ZK Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL0153251754	Group	Water
Issue date/time	29.04.2025/ 10:46	Sub Group	Drinking Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND,INDIA 835302 MONITORING SITE:AMTIPANI CHIRODIH 130.01 BAUXITE MINES	Contact Person Contact Number Email Id Order Date Order Number	Mr. Ankit Das +91 9971034775 ankit.das@adityabirla.com 05.04.2025/ 10:10 RP/MBJ/MM/25/0114/00
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### References of Quality Management System (Scope of Traceability Chain)

Customer Registration No.	EPIC/OTH/D153	Sample Booking Number	EPIC-251754
Sample(s) Code	251754	Sample Receipt (D/T)	24.04.2025/10:19

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS: 3025 (Part-1) 1987, R-2003& IS 1622 1981		
Sampling Start (D/T)	22.04.2025/ 15:00	Sampling End (D/T)	22.04.2025/ 15:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Karan Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	29	Humidity %	51	Wind direction	270°-90°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Office	GPS coordinate	23° 21' 10.03" / 84° 17' 14.82"
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### Date(s) of performance of the laboratory activities

Test start date	24.04.2025/ 10:40	Test completion date	28.04.2025/ 14:00
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### --Test Result --

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Total Coliform	IS 15185 2002	Per 100 ml	Not Detected	Shall not be detectable in any 100 ml sample
2.	E. Coli	IS 15185 2002	Per 100 ml	Not Detected	

### --Test Result End --

Prescribed Limit	IS 10500:2021
Operational Status	Unit was Operational During sampling.
Analysed by -Pratim Kumar/ Anup Kumar	



Checked by  
(E.A. Kumar)  
Technical Head

Verified & Issued by  
(Anish Das)  
Laboratory Head  
Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



Accredited by –  
NAB, MRC Certificate Number 12-1287  
Dietary and Food Hygiene Certificate issued  
Certified by –  
HACCP Audit and ISO 45001:2018





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✉ epiclabtech@gmail.com

CIN: U74999JH2022PT0100685  
PAN: AAHCE281M  
GST: 23AAHCE281M12X

Accredited by:-  
NABL with certificate number IC- 1267  
Bharat Vastu Sahakar Control Board  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018



## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000423	Discipline	Chemical
Report Unique ID	RL0153251755	Group	Water
Issue date/time	29.04.2025/ 10:50	Sub Group	Ground Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED

VILLAGE-COURT ROAD,

POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA,

STATE-JHARKHAND, INDIA 835302

MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINES

Contact Person

Contact Number

Email Id

Order Date

Order Number

Mr. Ankit Das

+91 9971034775

ankit.das@adityabirla.com

05.04.2025/ 10:10

RP/MJB/MM/25/0114/00

16. Copper(as Cu)	APHA 3111 B 2023	mg/l	BDL(MDL-0.2)	0.05	1.5
17. Iron (as Fe)	APHA 3111 B 2023	mg/l	BDL(MDL-0.1)	1.0	No relaxation
18. Lead (as Pb)	APHA 3111 B 2023	mg/l	BDL(MDL-0.01)	0.01	No relaxation
19. Cadmium (as Cd)	APHA 3111 B 2023	mg/l	BDL(MDL-0.003)	0.003	No relaxation
20. Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	BDL(MDL-0.05)	0.05	No relaxation
21. Nickel (as Ni)	APHA 3111 B 2023	mg/l	BDL(MDL-0.02)	0.02	No relaxation
22. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	0.05
23. Selenium (as Se)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	No relaxation
24. Manganese (as Mn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.05)	0.1	0.3
25. Zinc(as Zn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.04)	5	15

--Test Result End--

Prescribed Limit

IS 10500:2021

Operational Status

Unit was Operational During sampling.

Analysed by -Pratima Kumer/ Anjali Kumer



Checked by  
(B.N. Kumar)  
Technical Head

Verified & Issue by  
(Anish Das)  
Laboratory Head

EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



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CIN:-U74900JH2022PTC016495

PAN:-AAHCE2681M

GST:-21AAHCE3611A123

Recognized by:-

(Jharkhand) State Pollution Control Board

Certified by:-

ISO 9001:2015 and ISO 14001:2015

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0153251755	Group	Water
Issue date/time	29.04.2025/ 10:50	Sub Group	Ground Water

Report Issue to		Contact Person	
M/s - MINERALS & MINERALS LIMITED		Mr. Ankit Das	
VILLAGE-COURT ROAD,		Contact Number	
POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA,		+91 9971034775	
STATE-JHARKHAND, INDIA 835302		Email Id	
MONITORING SITE: ANTIPANI CHIRODIH 130.01 BAUXITE MINES		ankit.das@adityabirla.com	
		Order Date	
		05.04.2025/ 10:10	
		Order Number	
		RP/MJB/MM/25/0114/00	

References of Quality Management System (Steps of Irastability Chain)			
Customer Registration No.	EPIC/OTH/0153	Sample Booking Number	251755
Sample(s) Code	251755	Sample Receipt (D/T)	24.04.2025/ 10:20

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS: 3025 (Part-1) 1987, R-2003		
Sampling Start (D/T)	22.04.2025/ 15:30	Sampling End (D/T)	22.04.2025/ 15:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Karan Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling							
Weather condition	Clear	Temperature (°C)	29	Humidity %	51	Wind direction	270°-90°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Antipani West	GPS coordinate	23° 20' 49.74" / 84° 16' 53.98"

Date(s) of performance of the laboratory activities			
Test start date	24.04.2025/ 10:40	Test completion date	28.04.2025/ 14:00

### --Test Result --

Sl	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible Limit
1.	Fluoride (as F)	APHA 4500 F-C 2023	mg/l	BDL(MDL-0.1)	1.0	1.5
Group-Residues and Contaminants in Water				Sub Group-Trace Metals Elements		
2.	Aluminum	IS 3025 (P-55)-2019	mg/l	BDL(MDL-0.1)	0.05	0.2
3.	Boron	IS 3025 (P-57)-2021	mg/l	BDL(MDL-0.1)	0.5	1.0
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	0.5	No relaxation
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	0.1	No relaxation
Group-Residues and Contaminants in Water				Sub Group-Pesticides		
6.	Alachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	20	No relaxation
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
8.	Dieldrin	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.03	No relaxation
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.005)	0.01	No relaxation
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	125.0	No relaxation
12.	Chlorpyrifos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	30.0	No relaxation
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	3.0	No relaxation





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✉ epiclabtech@gmail.com

CIN: U74900JH2022PTC019685 Accredited by -

PAN: AANCE3815M

GST: 20AANCE3815M12X

National State Pollution Control Board

Certified by -

ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0153251755	Group	Water
Issue date/time	29.04.2025/ 10:50	Sub Group	Ground Water

### Report Issued to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD,  
POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA,  
STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINES

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adityabiria.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

15. Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
16. Malathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	190.0	No relaxation
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	0.3	No relaxation
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	1.0	No relaxation
19. Phorate	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
20. DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	1.0	No relaxation
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	0.4	No relaxation

—Test Result End —

Prescribed Limit IS 10500:2023  
Operational Status Unit was Operational During sampling.  
Analyzed by -Pratima Kanari/ Anshu Kumar



Checked by  
(R.K. Kanari)  
Technical Head

Verified & Issued by  
(Anshu Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



# EPIC LabTech Private Limited

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QMS - 17499/HQ022711019645  
HAC - 4AMCE000M  
GST - 26AAHCE1611M12X

Accredited by -  
Jharkhand State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL0153251756	Group	Water
Issue date/time	29.04.2025/ 10:53	Sub Group	Ground Water

### Report Issue to

M/S - MINERALS & MINERALS LIMITED VILLAGE- COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND,INDIA 835302 MONITORING SITE :AMTIPANI CHIRODIH 130.01 BAUXITE MINES	Contact Person Contact Number Email Id Order Date Order Number	Mr. Ankit Das +91 9971034775 ankit.das@adityabiria.com 05.04.2025/ 10:10 RP/MJB/MM/25/0114/00
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### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0153	Sample Booking Number	EPIC-251756
Sample(s) Code	251756	Sample Receipt (D/T)	24.04.2025/10:21

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS : 3025 (Part-1) 1987, R-2003& IS 1622 1981		
Sampling Start (D/T)	22.04.2025/ 15:30	Sampling End (D/T)	22.04.2025/ 15:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Karan Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	29	Humidity %	51	Wind direction	270°-90°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Amtipani Well	GPS coordinate	23° 20' 49.74" / 84° 18' 53.98"
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### Date(s) of performance of the laboratory activities

Test start date	24.04.2025/ 10:40	Test completion date	28.04.2025/ 14:00
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### --Test Result --

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Total Coliform	IS 15185 2002	Per 100 ml	Not Detected	Shall not be detectable in any 100 ml sample
2.	E.Coli	IS 15185 2002	Per 100 ml	Not Detected	

### --Test Result End --

Prescribed Limit	IS 10500:2021
Operational Status	Unit was Operational During sampling.
Analysed by -Prerna Kumar/ Anshu Kumar	



Checked by  
(EX. Kumar)  
Technical Head

Verified & Issued by  
(Anshu Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





# EPIC LabTech Private Limited

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CIN - U74999JH2022PTC010685  
PAN - AAHCE3811M  
GST - 20AAHCE3811M12X

Accredited by:-  
NABL with certificate number TC - 12887  
Jharkhand State Pollution Control Board  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018



## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000607	Discipline	Chemical
Report Unique ID	RL0186252188	Group	Atmospheric Pollution
Issue date/time	26.05.2025/ 13:17	Sub Group	Ambient Air Quality

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adityabirta.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0186	Sample Booking Number	EPIC-252188
Sample(s) Code	252188 (A) (B) (C) (D)	Sample Receipt (D/T)	20.05.2025/ 10:37

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	18.05.2025/ 12:05	Sampling End (D/T)	19.05.2025/ 09:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	27	Humidity %	47	Wind direction	270°-90°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Site (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 20' 32.13" / 84° 17' 29.11"
S. Location B	Weigh Bridge (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 21' 08.52" / 84° 17' 21.05"
S. Location C	Mine Office (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 21' 10.37" / 84° 17' 15.52"
S. Location D	Entrance Gate (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 21' 30.01" / 84° 17' 27.14"

### Date(s) of performance of the laboratory activities

Test start date	20.05.2025/ 10:53	Test completion date	24.05.2025/ 10:10
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### -Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS:5182 (P-23) 2022	µg/m <sup>3</sup>	79.01	83.01	75.04	82.00	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS:5182 (P-24) 2019	µg/m <sup>3</sup>	33.15	41.29	36.44	38.01	90 (24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m <sup>3</sup>	09.08	11.01	08.04	10.14	90 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m <sup>3</sup>	22.84	25.82	20.23	23.60	80 (24 hr)
5.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m <sup>3</sup>	40.26	42.21	36.04	40.26	400 (24 hr)
6.	Ozone (O <sub>3</sub> )	IS:5182 (P-09) 2019	µg/m <sup>3</sup>	28.26	30.04	26.11	35.05	100 (1 hr)
7.	Lead (Pb)	IS:5182 (P-22) 2019	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182 (P-26) 2020	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
9.	Arsenic (As)	USEPA IO 3.2-1999	ng/m <sup>3</sup>	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	-

### -Test Results End -

Prescribed Limit	Environmental Protection Rules-1986, Schedule VII.
Operational Status	Unit was Operational During sampling.
Analysed by -	A.K. Sinha



Reviewed by  
(B.R. Kumar)  
Technical Head

Issued by  
(Ankit Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





# EPIC LabTech Private Limited

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Accredited by: NABL (N/AHCE3611M) for Environmental Testing  
Certified by: ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0186252188	Group	Atmospheric Pollution
Issue date/time	26.05.2025/ 13:17	Sub Group	Ambient Air Quality

### Report Issue to

M/s - MINERALS & MINERALS LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE : AMTIPANI CHIRODIH 130.01 BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Ankit Das +91 9971034775 ankit.das@adityabirla.com 05.04.2025/ 10:10 RP/MJB/MM/25/0114/00
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### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0186	Sample Booking Number	EPIC-252188
Sample(s) Code	252188 (A) (B) (C) (D)	Sample Receipt (D/T)	20.05.2025/ 10:37

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	18.05.2025/ 12:05	Sampling End (D/T)	19.05.2025/ 09:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	27	Humidity %	47	Wind direction	270°-90°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Site (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 20' 32.13" / 84° 17' 29.11"
S. Location B	Weigh Bridge (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 21' 08.52" / 84° 17' 21.05"
S. Location C	Mine Office (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 21' 10.37" / 84° 17' 15.52"
S. Location D	Entrance Gate (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 21' 30.01" / 84° 17' 27.14"

### Date(s) of performance of the laboratory activities

Test start date	20.05.2025/ 10:53	Test completion date	24.05.2025/ 10:10
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### -Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C <sub>6</sub> H <sub>6</sub> )	IS 5182(P-11) 2006	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS 5182(P-12) 2004	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01/00	mg/m <sup>3</sup>	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

### -Test Results End-

Prescribed Limit	Environmental (Protection) Rules-1986, Schedule VII
Operational Status	Unit was Operational During sampling.
Analyzed by - A.K. Sinha	



Reviewed by  
(B.K. Kumar)  
Technical Head





# EPIC LabTech Private Limited



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CIN - U74999JK2022PTC019683  
PAN - AAACE3613M  
GST - 23AAACE3613M1Z8

Accredited by -  
NABL, with certificate number JC- 12807  
Jharkhand State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	TC128872500000608	Discipline	Chemical
Report Unique ID	RL0186252189	Group	Atmospheric Pollution
Issue date/time	26.05.2025/ 13:19	Sub Group	Ambient Noise

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MIB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0186	Sample Booking Number	EPIC-252189
Sample(s) Code	252189 (A) (B) (C) (D)	Sample Receipt (D/T)	20.05.2025/ 10:42

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	18.05.2025/ 12:05	Sampling End (D/T)	19.05.2025/ 09:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS 9589:1981 (RA 2020) & CPCB Method S.O.50 (E) dated 11/01/2010		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	27	Humidity %	47	Wind direction	270°-90°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Site (Amtipani Chirodih Bauxite Mine)	GPS coordinate	23° 20' 32.13" / 84° 17' 29.11"
S. Location B	Weigh Bridge (Amtipani Chirodih Bauxite Mine)	GPS coordinate	23° 21' 06.52" / 84° 17' 21.05"
S. Location C	Mine Office (Amtipani Chirodih Bauxite Mine)	GPS coordinate	23° 21' 10.37" / 84° 17' 15.52"
S. Location D	Entrance Gate (Amtipani Chirodih Bauxite Mine)	GPS coordinate	23° 21' 30.01" / 84° 17' 27.14"

### Date(s) of performance of the laboratory activities

Test start date	20.05.2025/ 11:05	Test completion date	24.05.2025/ 10:10
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### -Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	L <sub>eq</sub> (Day time)	IS: 9989:1981	dB (A)	48.5	45.2	49.6	58.3	75
2.	L <sub>eq</sub> (Night time)	IS: 9989:1981	dB (A)	36.2	39.2	40.4	43.5	70

### -Test Results End -

Prescribed Limit Environmental (Protection) Rules-1986, Schedule III.  
Operational Status Unit was Operational During sampling.  
Analysed by -A.K. Sinha



Reviewed by  
(B.N. Kumar)  
Technical Head







# EPIC LabTech Private Limited

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CIN:- U74999JH2022PTC011062  
PAN:- AAHCE3311M  
GST:- 20AAHCE3311M1Z3

Accredited by :-  
NABL, vide certificate number TC-12887  
Jharkhand State Pollution Control Board  
Certified by :-  
ISO 9001:2015 and ISO 45001:2018



TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000009	Discipline	Chemical
Report Unique ID	RL0186252190	Group	Pollution & Environment
Issue date/time	26.05.2025/ 10:21	Sub Group	Waste Water (Effluent)

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0186	Sample Booking Number	EPIC-252190
Sample(s) Code	252190	Sample Receipt (D/T)	20.05.2025/ 10:43

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	18.05.2025/ 15:55	Sampling End (D/T)	18.05.2025/ 16:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	27	Humidity %	47	Wind direction	270°-90°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Work Shop (Outlet)	GPS coordinate	23° 21' 16.96" / 84° 17' 18.73"
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### Date(s) of performance of the laboratory activities

Test start date	20.05.2025/ 11:00	Test completion date	24.05.2025/ 12:30
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### --Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	6.83	6.5-8.5
2.	BOD (3 days at 27°C)	IS 3025 (P-44) 2000	mg/l	11.5	-
3.	COD	IS 3025 (P-58) 2000	mg/l	80.0	150
4.	Oil & Grease	IS 3025 (P-39) 2021	mg/l	BDL(MDL-04)	10
5.	Total Suspended Solid	IS 3025 (P-17) 2022	mg/l	26.00	50
6.	Phosphate as PO <sub>4</sub>	IS 3025 (P-31/Sec-1) 2022	mg/l	1.04	-
7.	Zinc as Zn	APHA 3111 B 2023	mg/l	BDL(MDL-0.04)	-

### --Test result End --

Prescribed Limit Environmental (Protection) Rules-1986, Schedule I, Serial No. 114.  
Operational Status Unit was Operational During sampling.

Analysed by - Anjali Kumari



Reviewed by  
(B.N. Kumar)  
Technical Feed





# EPIC LabTech Private Limited

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ON - U74999JM2022PTC019685  
PAN - AANICE3611M  
GST - 20AANICE3611M1Z1X

Accredited by:-  
Bharat and State Pollution Control Board  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0186252190	Group	Pollution & Environment
Issue date/time	26.05.2025/ 13:21	Sub Group	Waste Water (Effluent)

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-  
LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +919971034775  
Email Id ankit.das@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0186	Sample Booking Number	EPIC-252190
Sample(s) Code	252190	Sample Receipt (D/T)	20.05.2025/ 10:43

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/006
Sampling Start (D/T)	18.05.2025/ 15:55	Sampling End (D/T)	18.05.2025/ 16:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	27	Humidity %	47	Wind direction	270°-90°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Work Shop (Outlet)	GPS coordinate	23° 21' 16.96" / 84° 17' 18.73"
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### Date(s) of performance of the laboratory activities

Test start date	20.05.2025/ 11:00	Test completion date	24.05.2025/ 12:30
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### -Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Total Dissolve Solids (TDS)	IS 3025 (P-31) 2003	mg/L	633.00	-
2.	Dissolve Oxygen (DO)	IS 3025 (P-38) 1986	mg/L	0.80	-

### -Test result End -

Prescribed Limit Environmental (Protection) Rules-1986, Schedule I, Serial No. 114.  
Operational Status Unit was Operational During sampling.

Analysed by - Anjali Kumari



Reviewed by  
(B.A. Kumar)  
Technical Head

Issued by  
(Ankit Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





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CIN:-U74309WH2022PTC019885  
PAN:-AAHCE3610M  
GST:-20AAHCE3610M1E3

Accredited by -  
NABL with certificate number TC - 13847  
Haryana State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000717	Discipline	Chemical
Report Unique ID	RL02192525014	Group	Atmospheric Pollution
Issue date/time	20.06.2025/ 17:15	Sub Group	Ambient Air Quality

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0219	Sample Booking Number	EPIC-2525014
Sample(s) Code	2525014 (A) (B) (C) (D)	Sample Receipt (D/T)	17.06.2025/ 10:50

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	15.06.2025/ 12:20	Sampling End (D/T)	16.06.2025/ 09:17
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	29	Humidity %	58	Wind direction	20°-200°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Site (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 20' 32.13" / 84° 17' 29.11"
S. Location B	Weigh Bridge (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 21' 08.52" / 84° 17' 21.05"
S. Location C	Mine Office (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 21' 10.37" / 84° 17' 15.52"
S. Location D	Entrance Gate (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 21' 30.01" / 84° 17' 27.14"

### Date(s) of performance of the laboratory activities

Test start date	17.06.2025/ 11:10	Test completion date	20.06.2025/ 15:12
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### -Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS:5182 (P-23) 2022	µg/m <sup>3</sup>	77.66	81.68	73.69	80.17	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS:5182 (P-24) 2019	µg/m <sup>3</sup>	31.04	39.35	34.36	36.02	60(24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m <sup>3</sup>	08.22	09.40	07.44	09.40	80(24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m <sup>3</sup>	21.14	24.31	17.97	22.20	80(24 hr)
5.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2016	µg/m <sup>3</sup>	38.31	40.26	34.09	39.29	400(24 hr)
6.	Ozone (O <sub>3</sub> )	IS:5182 (P-09) 2019	µg/m <sup>3</sup>	26.11	28.26	24.32	32.19	180(1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0(24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m <sup>3</sup>	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	-

### -Test Results End -

Prescribed Limit Environmental (Protection) Rules-1986, Schedule VI.  
Operational Status Unit was Operational During sampling.  
Analysed by - Archana Gaurin



Reviewed by  
(R.K. Kumar)  
Technical Head

12  
Ankit Das  
Ankit Das  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.

Ranchi, Jharkhand

Page 1 of 1

Guaranteed Terms | 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility at Ranchi, Jharkhand, India as per method required and results relate only to the sample tested in prescribed Date & time | 3. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law. | 4. Any complaint about this report should be communicated in writing within 10 days of its issue | 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to involved amount only. | 6. All disputes are subjected to Ranchi Jurisdiction and exclusive liability of the laboratory does not exceed the testing and sampling charges | 7. Opinion does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any liability by use or misuse of this report. | 8. Where the results are from external provider are marked as \* mark. |  
Abbreviation - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantification).





# EPIC LabTech Private Limited

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CIN:-U74999JH2022PTC019485  
PAN:-AAMCE3611M  
GST:-20AAMCE3611M1ZX

Accredited by -  
Rajasthan State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02192525014	Group	Atmospheric Pollution
Issue date/time	20.06.2025/ 17:15	Sub Group	Ambient Air Quality

### Report Issue to

M/s - MINERALS & MINERALS LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Ankit Das +91 9971034775 ankit.das@adityabirla.com 05.04.2025/ 10:10 RP/MJB/MM/25/0114/00
---	--	---

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0219	Sample Booking Number	EPIC-2525014
Sample(s) Code	2525014 (A) (B) (C) (D)	Sample Receipt (D/T)	17.06.2025/ 10:50

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	15.06.2025/ 12:20	Sampling End (D/T)	16.06.2025/ 09:17
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	27	Humidity %	58	Wind direction	20°-200°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Site (Amtipani Chirodih Bauxite Mine)	GPS coordinate	23° 20' 32.13"/ 84° 17' 29.11"
S. Location B	Weigh Bridge (Amtipani Chirodih Bauxite Mine)	GPS coordinate	23° 21' 08.52"/ 84° 17' 21.05"
S. Location C	Mine Office (Amtipani Chirodih Bauxite Mine)	GPS coordinate	23° 21' 10.37"/ 84° 17' 15.52"
S. Location D	Entrance Gate (Amtipani Chirodih Bauxite Mine)	GPS coordinate	23° 21' 30.01"/ 84° 17' 27.14"

### Date(s) of performance of the laboratory activities

Test start date	17.06.2025/ 11:10	Test completion date	20.06.2025/ 15:12
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### -Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C <sub>6</sub> H <sub>6</sub> )	IS 5182(P-11) 2006	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS 5182(P-12) 2004	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01/00	mg/m <sup>3</sup>	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

### -Test Results End -

Prescribed Limit	Environmental (Protection) Rules-1986, Schedule VII.
Operational Status	Unit was Operational During sampling.
Analysed by - Archana Goran	



  
Reviewed by  
(B.K. Kumar)  
Technical Head





# EPIC LabTech Private Limited

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PAN:- AAHCE3811M  
GST:- 20AAHCE3811M12X

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ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02192525015	Group	Atmospheric Pollution
Issue date/time	20.06.2025/ 17:17	Sub Group	Work Zone Noise

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: ANTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person  
Contact Number  
Email Id  
Order Date  
Order Number

Mr. Ankit Das  
+91 9971034775  
ankit.das@adityabirla.com  
05.04.2025/ 10:10  
RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Data)

Customer Registration No.	EPIC/OTH/0219	Sample Booking Number	EPIC-2525015
Sample(s) Code	2525015 (A) (B)	Sample Receipt (D/T)	17.06.2025/ 10:53

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D)	15.06.2025	Sampling End (D)	15.06.2025
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 9989:1981 (RA 2020) & CPCB Method S.O.50 (E) dated 11/01/2010		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	29	Humidity %	58	Wind direction	20°-200°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mines Pit	GPS coordinate	23° 21' 16.00" / 84° 17' 22.00"
S. Location B	Antipani Chirodih Bauxite Mine (130.01)	GPS coordinate	23° 21' 13.59" / 84° 17' 23.21"

### Date(s) of performance of the laboratory activities

Test start date	17.06.2025/ 11:10	Test completion date	20.06.2025/ 15:47
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### -Test Results-

Sl	Test Parameters	Method used	Unit	Results		Limits
				A	B	
1.	$L_{eq}$	IS: 9989:1981	dB (A)	72.5	75.4	85

### -Test Results End -

Prescribed Limit  
Operational Status

NIOSH - Publication No. 98-126 in 1972, Table 1-1  
Unit was Operational During sampling.

Analysed by - Archana Gorain



Reviewed by  
(S.R. Kumar)  
Technical Head

Issue by  
(Anshu Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand







# EPIC LabTech Private Limited

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CIN: U74999JH2022PTC029665  
PAN: AAHCE3810M  
GST: 20AAHC13871M1ZK

Accredited by:-  
NABL, lab certificate number IC-12887  
Jharkhand State Pollution Control Board  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018



## Analysed Test Certificate

Unique Lab Report No.	TC1288725000000850	Discipline	Chemical
Report Unique ID	RL02462528057	Group	Atmospheric Pollution
Issue date/time	15.07.2025/ 16:30	Sub Group	Ambient Air Quality

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST. -LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0246	Sample Booking Number	EPIC-2528057
Sample(s) Code	2528057 (A) (B) (C) (D)	Sample Receipt (D/T)	11-07-2025/10:12

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	09.07.2025/ 11:45	Sampling End (D/T)	10.07.2025/ 09:09
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	69	Wind direction	40°-220°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Site (Amtipani Chirodih Bauxite Mine)	GPS coordinate	23° 20' 32.13" / 84° 17' 29.11"
S. Location B	Weigh Bridge (Amtipani Chirodih Bauxite Mine)	GPS coordinate	23° 21' 08.52" / 84° 17' 21.05"
S. Location C	Mine Office (Amtipani Chirodih Bauxite Mine)	GPS coordinate	23° 21' 10.37" / 84° 17' 15.52"
S. Location D	Entrance Gate (Amtipani Chirodih Bauxite Mine)	GPS coordinate	23° 21' 50.01" / 84° 17' 27.14"

### Date(s) of performance of the laboratory activities

Test start date	11.07.2025/ 10:50	Test completion date	15.07.2025/ 16:00
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### -Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS:5182 (P-23) 2022	µg/m³	79.46	83.27	74.38	86.69	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS 5182 (P-24) 2019	µg/m³	34.49	37.51	29.50	32.96	60(24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m³	06.75	08.29	06.30	07.59	80(24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m³	16.67	21.97	18.94	20.04	80(24 hr)
5.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m³	38.73	36.11	41.35	45.42	400(24 hr)
6.	Ozone (O <sub>3</sub> )	IS:5182 (P-08) 2019	µg/m³	32.73	30.42	37.03	32.07	180(1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0(24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	
9.	Arsenic (As)	USEPA IO 3.2-1999	ng/m³	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	

### -Test Results End -

Prescribed Limit	Environmental (Protection) Rules-1966, Schedule VII.
Operational Status	Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



Reviewed by  
(R.K. Kumar)  
Technical Head

Issued by  
(Anish Das)  
Laboratory Head  
Authorized Signatory  
EPIC LabTech Pvt. Ltd.

Page 3 of 3

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Abbreviation:- BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation).





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CIN - U74999JH2022PTC018685  
PAN - AAHCE361YM  
GST - 20AAHCE361YM1ZX

Accredited by -  
Bharat Standards Institution (India) Private  
Certified by -  
ISO 16046:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02452528057	Group	Atmospheric Pollution
Issue date/time	15.07.2025/ 16:30	Sub Group	Ambient Air Quality

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person  
Contact Number  
Email Id  
Order Date  
Order Number  
Mr. Ankit Das  
+91 9971034775  
ankit.das@adityabiria.com  
05.04.2025/ 10:10  
RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0246	Sample Booking Number	EPIC-2528057
Sample(s) Code	2528057 (A), (B), (C), (D)	Sample Receipt (D/T)	11.07.2025/10:12

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	09.07.2025/ 11:45	Sampling End (D/T)	10.07.2025/ 09:09
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	69	Wind direction	40°-220°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Site (Amtipani Chirodih Bauxite Mine)	GPS coordinate	23° 20' 32.13" / 84° 17' 29.11"
S. Location B	Weigh Bridge (Amtipani Chirodih Bauxite Mine)	GPS coordinate	23° 21' 08.52" / 84° 17' 21.05"
S. Location C	Mine Office (Amtipani Chirodih Bauxite Mine)	GPS coordinate	23° 21' 10.37" / 84° 17' 15.52"
S. Location D	Entrance Gate (Amtipani Chirodih Bauxite Mine)	GPS coordinate	23° 21' 30.01" / 84° 17' 27.14"

### Date(s) of performance of the laboratory activities

Test start date	11.07.2025/ 10:50	Test completion date	15.07.2025/ 15:00
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### -Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C <sub>6</sub> H <sub>6</sub> )	IS 5182(P-11) 2006	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS 5182(P-12) 2004	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01/00	mg/m <sup>3</sup>	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

### -Test Results End-

Prescribed Limit  
Operational Status  
Analysed by - Vishal Mangaraj

Environmental (Protection) Rules-1986, Schedule VII

Unit was Operational During sampling.



Reviewed by  
(B.K. Kumar)  
Technical Head







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PAN-AAHCE3411M  
GST-28AAHCE3411M1ZL

Accredited by:-  
NABL, with certificate number TC- 52807  
Jharkhand State Pollution Control Board  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018



## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000851	Discipline	Chemical
Report Unique ID	RL02462528058	Group	Water
Issue date/time	15.07.2025/ 16:33	Sub Group	Drinking Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0246	Sample Booking Number	EPIC-2528058
Sample(s) Code	2528058	Sample Receipt (D/T)	11.07.2025/10:13

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	09.07.2025/ 15:11	Sampling End (D/T)	09.07.2025/ 16:23
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS: 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	69	Wind direction	40°-220°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Office	GPS coordinate	23° 21' 10.03" / 84° 17' 14.82"
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### Date(s) of performance of the laboratory activities

Test start date	11.07.2025/ 10:33	Test completion date	15.07.2025/ 15:05
-----------------	-------------------	----------------------	-------------------

### --Test Result--

Sl.	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible limit
1.	pH value at 25.5°C	IS 3025 (P-11) 2022	-	6.86	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.46	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	<5	5	15
4.	Odour	IS 3025 (P-06) 2018	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	94.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	18.66	250	1000
8.	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (P-23) 2019	mg/l	55.00	200	600
9.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21) 2009	mg/l	80.00	300	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	17.84	75	200
11.	Free Residual Chlorine	IS 3025 (P-28) 1986	mg/l	BDL(MDL-0.4)	0.2	1
12.	Sulphate (as SO <sub>4</sub> )	IS 3025 (P-24/Sec-1) 2022	mg/l	1.43	200	400
13.	Nitrate (as NO <sub>3</sub> )	APHA 4500 B 2023	mg/l	0.85	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL(MDL-0.001)	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	8.84	30	100



# EPIC LabTech Private Limited



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CIN: U74999JH2022PTC029983  
PAN: AARCE3812M  
GST: 20AARCE3812M1ZK

Accredited by -  
NABL with certificate number TC-12887  
Jharkhand State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000851	Discipline	Chemical
Report Unique ID	RL02462528058	Group	Water
Issue date/time	15.07.2025/ 16:33	Sub Group	Drinking Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### Group - Residues and Contaminants in Water

### Sub Group - Trace Metals Elements

16. Copper (as Cu)	APHA 3111 B 2023	mg/l	BDL(MDL-0.2)	0.05	1.5
17. Iron (as Fe)	APHA 3111 B 2023	mg/l	BDL(MDL-0.1)	1.0	No relaxation
18. Lead (as Pb)	APHA 3111 B 2023	mg/l	BDL(MDL-0.01)	0.01	No relaxation
19. Cadmium (as Cd)	APHA 3111 B 2023	mg/l	BDL(MDL-0.003)	0.003	No relaxation
20. Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	BDL(MDL-0.05)	0.05	No relaxation
21. Nickel (as Ni)	APHA 3111 B 2023	mg/l	BDL(MDL-0.02)	0.02	No relaxation
22. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	0.05
23. Selenium (as Se)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	No relaxation
24. Manganese (as Mn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.09)	0.1	0.3
25. Zinc (as Zn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.04)	5	15

-Test result End -

Prescribed Limit  
Operational Status

IS 10500:2021  
Unit was Operational During sampling.

Analysed by - Vishal Mangraj



*[Signature]*  
Reviewed by  
(B.K. Kumar)  
Technical Head

*[Signature]*  
Issued by  
(Ankit Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



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**Abbreviations:** BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantification).





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CIN:-U74999JH2022PTC019825

PAN:-AAACE3611M

GST:-20AAACE3611M12X

Accredited by:-

NABL (National Accreditation Board for Testing and Calibration Laboratories)

Certified by:-

ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02462528058	Group	Water
Issue date/time	15.07.2025/ 16:33	Sub Group	Drinking Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@edityabirta.com  
Order Date 06.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0246	Sample Booking Number	EPIC-2528058
Sample(s) Code	2528058	Sample Receipt (D/T)	11-07-2025/10:13

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	09.07.2025/ 15:11	Sampling End (D/T)	09.07.2025/ 15:23
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	69	Wind direction	40°-220°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Office	GPS coordinate	23° 21' 10.03" / 84° 17' 14.82"
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### Data(s) of performance of the laboratory activities

Test start date	11.07.2025/ 10:33	Test completion date	15.07.2025/ 15:05
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### -Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible limit
1.	Fluoride (as F)	APHA 4500 F-C 2023	mg/l	BDL(MDL-0.1)	1.0	1.5
Group-Residues and Contaminants in Water				Sub Group-Trace Metals Elements		
2.	Aluminum	IS 3025 (P-55)-2019	mg/l	BDL(MDL-0.1)	0.03	0.2
3.	Boron	IS 3025 (P-57)-2021	mg/l	BDL(MDL-0.1)	0.5	1.0
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	0.5	No relaxation
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	0.1	No relaxation
Group-Residues and Contaminants in Water				Sub Group-Pesticides		
6.	Alachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	20	No relaxation
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
8.	Dieldrin	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.03	No relaxation
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.005)	0.01	No relaxation
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	125.0	No relaxation
12.	Chlorpyrifos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	30.0	No relaxation
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	3.0	No relaxation



# EPIC LabTech Private Limited

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CIN:-U74999JH2022PTC010585 Accredited by:-

PAN:-AAHCE3811M

GST:-20RANCE3811M12X

Jharkhand State Pollution Control Board

Certified by:-

ISO 9001:2015 and ISO 45001:2018

## Analysis Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02462528058	Group	Water
Issue date/time	15.07.2025/ 16:33	Sub Group	Drinking Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED

VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302

MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person

Contact Number

Email Id

Order Date

Order Number

Mr. Ankit Das

+91 9871034775

ankit.das@adityabirla.com

05.04.2025/ 10:10

RP/MJB/MM/25/0114/00

15. Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
16. Malathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	190.0	No relaxation
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	0.3	No relaxation
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	1.0	No relaxation
19. Phorate	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
20. DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	1.0	No relaxation
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	0.4	No relaxation

--Test Result End--

Prescribed Limit

IS 10500:2021

Operational Status

Unit was Operational During sampling.

Analysed by - Vishal Mangraj



Reviewed by  
(R.K. Kumar)  
Technical Head

Issued by  
(Anish Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



Page 2 of 2

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**Abbreviation** - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantification).





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CIN:-U74999JH2022PTC019685  
PAN:-AANCE3611M  
GST:-20AANCE3611M12X

Accredited by:-  
Jharkhand State Pollution Control Board  
Certified by:-  
ISO 9001:2015 and ISO 43001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL02482528059	Group	Water
Issue date/time	15.07.2025/ 16:36	Sub Group	Drinking Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST -LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person	Mr. Ankit Das
Contact Number	+91 9971034775
Email Id	ankit.das@adityabirla.com
Order Date	05.04.2025/ 10:10
Order Number	RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0246	Sample Booking Number	EPIC-2528059
Sample(s) Code	2528059	Sample Receipt (D/T)	11.07.2025/10:13

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	08.07.2025/ 15:11	Sampling End (D/T)	09.07.2025/ 15:23
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS: 3025 (Part-1) 1967, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	69	Wind direction	40°-220°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Office	GPS coordinate	23° 21' 10.03" / 84° 17' 14.82"
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### Date(s) of performance of the laboratory activities

Test start date	11.07.2025/ 10:33	Test completion date	15.07.2025/ 15:05
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### -Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Total Coliform	IS 15185:2002	Per 100 ml	Not Detected	Shall not be detectable in any 100 ml sample
2.	E.Coli	IS 15185:2002	Per 100 ml	Not Detected	

### -Test result End -

Prescribed Limit	IS 10500:2021
Operational Status	Unit was Operational During sampling.
Analysed by - Sujata Kumari	



Reviewed by  
(E.K. Kumar)  
Technical Head

Issued by  
(Anish Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





# EPIC LabTech Private Limited



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CIN - U74999JH2022PTC019685  
PAN - AAHCE3611M  
GST - 20AAHCE3611M1ZK

Accredited by -  
NABL, with certificate number TC-12887  
Jharkhand State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 15189:2013

TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000001070	Discipline	Chemical
Report Unique ID	RL02782535048	Group	Atmospheric Pollution
Issue date/time	29.08.2025/ 18:15	Sub Group	Ambient Air Quality

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE- COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST -LOHARDAGA, STATE -JHARKHAND, INDIA 835302  
MONITORING SITE : AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Days of Traceability Chain)

Customer Registration No.	EPIC/OTH/0278	Sample Booking Number	EPIC-2535048
Sample(s) Code	2535048 (A) (B) (C) (D)	Sample Receipt (D/T)	25.08.2025/ 11:51

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	23.08.2025/ 11:46	Sampling End (D/T)	24.08.2025/ 09:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	25	Humidity %	70	Wind direction	40°-220°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Site (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 20' 32.13" / 84° 17' 29.11"
S. Location B	Weigh Bridge (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 21' 08.52" / 84° 17' 21.05"
S. Location C	Mine Office (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 21' 10.37" / 84° 17' 15.52"
S. Location D	Entrance Gate (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 21' 30.01" / 84° 17' 27.54"

### Date(s) of performance of the laboratory activities

Test start date	25.08.2025/ 12:11	Test completion date	29.08.2025/ 17:00
-----------------	-------------------	----------------------	-------------------

### -Test Results-

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS:5182 (P-23) 2022	µg/m <sup>3</sup>	79.09	83.02	74.02	86.20	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS 5182 (P-24) 2019	µg/m <sup>3</sup>	34.01	37.33	29.17	32.95	60 (24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m <sup>3</sup>	06.38	07.50	06.18	07.11	80 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m <sup>3</sup>	15.63	20.82	17.69	18.70	80 (24 hr)
5.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2016	µg/m <sup>3</sup>	36.44	35.82	41.06	45.13	400 (24 hr)
6.	Ozone (O <sub>3</sub> )	IS:5182 (P-09) 2019	µg/m <sup>3</sup>	32.40	30.09	36.70	31.74	180 (1 hr)
7.	Lead (Pb)	IS:5182 (P-22) 2019	µg/m <sup>3</sup>	BDL	BDL	BDL	BDL	1.0 (24 hr)
				(MDL-0.1)	(MDL-0.1)	(MDL-0.1)	(MDL-0.1)	
8.	Nickel (Ni)	IS:5182 (P-26) 2020	ng/m <sup>3</sup>	BDL	BDL	BDL	BDL	
				(MDL-0.1)	(MDL-0.1)	(MDL-0.1)	(MDL-0.1)	
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m <sup>3</sup>	BDL	BDL	BDL	BDL	
				(MDL-0.001)	(MDL-0.001)	(MDL-0.001)	(MDL-0.001)	

### -Test Results End -

Prescribed Limit Environmental (Protection) Rules-1986, Schedule VII.

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



Reviewed by  
(R.K. Kumar)  
Technical Head

Issue by  
(Gurnesh Garg)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand

Page 1 of 1

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Abbreviation:- BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantification).





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CIN - U74999(JH2022PTC019645) Accredited by:-

PAN - AAHCE3611M

GST - 25AAHCE3611M12X

Polynomial Data Pollution Control Board

Certified by:-

ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02782535046	Group	Atmospheric Pollution
Issue date/time	29.08.2025/ 18:15	Sub Group	Ambient Air Quality

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST-LOHARDAGA, STATE-JHARKHAND, INDIA 835307  
MONITORING SITE : AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adityabirla.com  
Order Date 31.03.2025/ 10:10  
Order Number 13612313868

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0278	Sample Booking Number	EPIC-2535048
Sample(s) Code	2535048 (A) (B) (C) (D)	Sample Receipt (D/T)	25.08.2025/ 11:51

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	23.08.2025/ 11:46	Sampling End (D/T)	24.08.2025/ 09:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	25	Humidity %	70	Wind direction	40°-220°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Site (Amtipani Chirodih Bauxite Mine)	GPS coordinate	23° 20' 32.13" / 84° 17' 29.11"
S. Location B	Weigh Bridge (Amtipani Chirodih Bauxite Mine)	GPS coordinate	23° 21' 08.52" / 84° 17' 21.05"
S. Location C	Mine Office (Amtipani Chirodih Bauxite Mine)	GPS coordinate	23° 21' 10.37" / 84° 17' 15.52"
S. Location D	Entrance Gate (Amtipani Chirodih Bauxite Mine)	GPS coordinate	23° 21' 30.01" / 84° 17' 27.14"

### Date(s) of performance of the laboratory activities

Test start date	25.08.2025/ 12:11	Test completion date	29.08.2025/ 17:00
-----------------	-------------------	----------------------	-------------------

### --Test Results--

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C <sub>6</sub> H <sub>6</sub> )	IS:5182(P-11) 2006	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:5182(P-12) 2004	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01/00	mg/m <sup>3</sup>	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

### --Test Results End --

Prescribed Limit Environmental (Protection) Rules-1986, Schedule VII.

Operational Status Unit was Operational During sampling.

Analyzed by - Vishal Mangaraj



Reviewed by  
(R.K. Kumar)  
Technical Head







# EPIC LabTech Private Limited



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CIN - U74999JH2022PTC019585  
PAN - AANCC3811M  
GST - 20AAHCB3811M12X

Accredited by -  
NABL, acc. certificate number TC-12887  
Jharkhand State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000001071	Discipline	Chemical
Report Unique ID	RL02782535049	Group	Water
Issue date/time	29.08.2025/ 18:18	Sub Group	Ground Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST -LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0278	Sample Booking Number	EPIC-2535049
Sample(s) Code	2535049	Sample Receipt (D/T)	25.08.2025/ 11:52

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	23.08.2025/ 11:50	Sampling End (D/T)	23.08.2025/ 11:55
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	25	Humidity %	70	Wind direction	40°-220°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Amtipani Well	GPS coordinate	23° 20' 49.74" / 84° 16' 53.98"
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### Date(s) of performance of the laboratory activities

Test start date	25.08.2025/ 12:20	Test completion date	29.08.2025/ 16:30
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### -Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible Limit
1.	pH value at 25.7°C	IS 3025 (P-11) 2022	-	7.22	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.49	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	<5	5	15
4.	Odour	IS 3025 (P-06) 2016	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	129.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	21.54	250	1000
8.	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (P-23) 2019	mg/l	75.00	200	600
9.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21) 2009	mg/l	103.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	19.68	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1996	mg/l	BDL(MDL-0.4)	0.2	1
12.	Sulphate (as SO <sub>4</sub> )	IS 3025 (P-34/Sec-1) 2022	mg/l	2.06	200	400
13.	Nitrate (as NO <sub>3</sub> )	APHA 4500 B 2023	mg/l	13.64	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL(MDL-0.001)	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	1.53	30	100



# EPIC LabTech Private Limited

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✉ epiclabtech@gmail.com

CIN:-U74999JH2022PTC019623  
PAN:-AAHCE387M  
GST:-20AAHCE387M1Z3

Accredited by:-  
NABL, cert. number TC-12887  
Jharkhand State Pollution Control Board  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018



## Analytical Test Certificate

Unique Lab Report No. TC1288725000001071  
Report Unique ID RL02782535049  
Issue date/time 29.08.2025/ 18:18

Discipline Chemical  
Group Water  
Sub Group Ground Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST. LOHARDAGA, STATE-JHARKHAND, INDIA 835303  
MONITORING SITE: AHTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### Group - Residues and Contaminants in Water,

### Sub Group - Trace Metals Elements

16. Copper (as Cu)	APHA 3111 B 2023	mg/l	BDL(MDL-0.2)	0.05	1.5
17. Iron (as Fe)	APHA 3111 B 2023	mg/l	BDL(MDL-0.1)	1.0	No relaxation
18. Lead (as Pb)	APHA 3111 B 2023	mg/l	BDL(MDL-0.01)	0.01	No relaxation
19. Cadmium (as Cd)	APHA 3111 B 2023	mg/l	BDL(MDL-0.003)	0.003	No relaxation
20. Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	BDL(MDL-0.05)	0.05	No relaxation
21. Nickel (as Ni)	APHA 3111 B 2023	mg/l	BDL(MDL-0.02)	0.02	No relaxation
22. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	0.05
23. Selenium (as Se)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	No relaxation
24. Manganese (as Mn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.09)	0.1	0.3
25. Zinc (as Zn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.04)	5	15

—Test result End—

Prescribed Limit IS 10500:2021

Operational Status Unit was Operational During sampling.

Analyzed by - Pappu Kumar



Reviewed by  
(S.N. Kumar)  
Technical Head

Issued by  
(Ankit Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



Page 2 of 2

**Contracted Notes** | 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility, at specific environmental conditions as method required and results relate only to the sample tested in prescribed Tests & times | 3. The Test report shall not be reprinted full or in part & can't be used as proof in the court of law | 4. Any complaint about this report should be communicated in writing within 30 days of its issue | 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to amount received only | 6. All disputes are subjected to Ranchi Jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges | 7. Opinion does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any liability caused by use or misuse of this report. | 8. When the results are from external provider are marked as "mark".

**Abbreviations** - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation).





# EPIC LabTech Private Limited

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✉ epiclabtech@gmail.com

CIN:-U74999JH2022PTC019685  
PAN:-AAHCE3611M  
GST:-20AAHCE3611M1ZK

Accredited by:-  
Paddy and Soil Nutrient Control Board  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL02782535050	Group	Water
Issue date/time	29.08.2025/ 18:21	Sub Group	Ground Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: ANTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@edityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Days of Traceability Data)

Customer Registration No.	EPIC/OTH/0278	Sample Booking Number	EPIC-2535050
Sample(s) Code	2535050	Sample Receipt (D/T)	25.08.2025/ 11:52

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	23.08.2025/ 11:50	Sampling End (D/T)	23.08.2025/ 11:55
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	25	Humidity %	70	Wind direction	40°-220°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Antipani Well	GPS coordinate	23° 20' 49.74" / 84° 16' 53.98"
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### Date(s) of performance of the laboratory activities

Test start date	25.08.2025/ 12:20	Test completion date	29.08.2025/ 18:30
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### -Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Total Coliform	IS 15185:2002	Per 100 ml	Not Detected	Shall not be detectable in any 100 ml sample
2.	E.Coli	IS 15185:2002	Per 100 ml	Not Detected	

### -Test result End -

Prescribed Limit IS 10500:2021  
Operational Status Unit was Operational During sampling.

Analysed by -Sajata Kumari



Reviewed by  
(S.N. Kumar)  
Technical Head

Issued by  
(Shrestha Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



# EPIC LabTech Private Limited

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✉ [epiclabtech@gmail.com](mailto:epiclabtech@gmail.com)

CIN - U74999JH2022PT0219885  
PAN - AANICE3012M  
GST - 20AANICE3012M1ZK

Accredited by -  
NABL, with certificate number TC-12887  
Bharat Standard Group-Reference Control Group  
Certified by -  
ISO 9001:2015 and ISO 45001:2018



TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000001072	Discipline	Chemical
Report Unique ID	RL02782535051	Group	Water
Issue date/time	29.08.2025/ 18:24	Sub Group	Surface Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST -LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person  
Contact Number  
Email Id  
Order Date  
Order Number

Mr. Ankit Das  
+91 9971034775  
[ankit.das@adityabirla.com](mailto:ankit.das@adityabirla.com)  
05.04.2025/ 10:10  
RP/MIB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0278	Sample Booking Number	EPIC-2535051
Sample(s) Code	2535051	Sample Receipt (D/T)	25.08.2025/ 11:53

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	23.08.2025/ 12:25	Sampling End (D/T)	23.08.2025/ 12:36
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS - 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	25	Humidity %	70	Wind direction	40°-220°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Chourapari Village (Spring Water)	GPS coordinate	23° 20' 57.97" / 84° 17' 02.84"
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### Data(s) of performance of the laboratory activities

Test start date	25.08.2025/ 12:10	Test completion date	29.08.2025/ 16:30
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### -Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	6.63	-
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.17	-
3.	Colour	IS 3025 (P-04) 2021	Hazen	5	-
4.	Odour	IS 3025 (P-05) 2018	-	Agreeable	-
5.	Taste	IS 3025 (P-07) 2017	-	Agreeable	-
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	196.00	-
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	13.3	-
8.	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (P-23) 2019	mg/l	30.00	-
9.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21) 2009	mg/l	40.16	-
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	12.83	-
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	BDL(MDL-0.4)	-
12.	Sulphate (as SO <sub>4</sub> )	IS 3025 (P-34/Sec-1)2022	mg/l	1.90	-
13.	Nitrate (as NO <sub>3</sub> )	APHA 4500 B 2023	mg/l	2.09	-
14.	Phenolic Compound	IS 3025 (F-43/Sec-1) 2022	mg/l	BDL(MDL-0.001)	-
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	1.98	-





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CIN: U74999JH2022PTC019685  
PAN: AAKCE2815M  
GST: 20AAHCE3801M12X

Accredited by -  
NABL with certificate number TC: 1367  
Ranchi State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000001072	Discipline	Chemical
Report Unique ID	RL02762535051	Group	Water
Issue date/time	29.08.2025/ 18:24	Sub Group	Surface Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person	Mr. Ankit Das
Contact Number	+91 9971034775
Email Id	ankit.das@edityabirla.com
Order Date	05.04.2025/ 10:10
Order Number	RP/MIB/MM/25/0114/00

### Group - Residues and Contaminants in Water,

### Sub Group - Trace Metals Elements

16. Copper (as Cu)	APHA 3111 B 2023	mg/l	BDL(MDL-0.2)	-
17. Iron (as Fe)	APHA 3111 B 2023	mg/l	BDL(MDL-0.1)	-
18. Lead (as Pb)	APHA 3111 B 2023	mg/l	BDL(MDL-0.01)	-
19. Cadmium (as Cd)	APHA 3111 B 2023	mg/l	BDL(MDL-0.003)	-
20. Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	BDL(MDL-0.05)	-
21. Nickel (as Ni)	APHA 3111 B 2023	mg/l	BDL(MDL-0.02)	-
22. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	-
23. Selenium (as Se)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	-
24. Manganese (as Mn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.09)	-
25. Zinc (as Zn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.04)	-

-Test result End-

### Prescribed Limit

### Operational Status

Analyzed by - Pappu Kumar

Unit was Operational During sampling.



Reviewed by  
(B.K. Kumar)  
Technical Head

Issued by  
(Unesh Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



Page 2 of 2

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**Abbreviations:** BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation).



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CIN - U74999JH2022PTC019581  
PAN - AAHCE2831M  
GST - 20AAHCE2831M1ZK

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Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Analystical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02782535051	Group	Water
Issue date/time	29.08.2025/ 18:24	Sub Group	Surface Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST -LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@edityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0278	Sample Booking Number	EPIC-2535051
Sample(s) Code	2535051	Sample Receipt (D/T)	25.08.2025/ 11:53

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	23.08.2025/ 12:25	Sampling End (D/T)	23.08.2025/ 12:36
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	25	Humidity %	70	Wind direction	40°-220°
-------------------	--------	------------------	----	------------	----	----------------	----------

### Sampling Location(s) with GPS coordinate(s)

S. Location A	Chourapari Village (Spring Water)	GPS coordinate	23° 20' 57.97" / 84° 17' 02.54"
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### Date(s) of performance of the laboratory activities

Test start date	25.08.2025/ 12:10	Test completion date	29.08.2025/ 16:30
-----------------	-------------------	----------------------	-------------------

### -Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Fluoride (as F)	APHA 4500 F-C 2023	mg/l	BDL(MDL-0.1)	-
Group-Residues and Contaminants in Water				Sub Group-Trace Metals Elements	
2.	Aluminum	IS 3025 (P-55):2019	mg/l	BDL(MDL-0.1)	-
3.	Boron	IS 3025 (P-57):2021	mg/l	BDL(MDL-0.1)	-
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	-
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.001)	-
Group-Residues and Contaminants in Water				Sub Group-Pesticides	
6.	Alachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
8.	Dieldrin	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	-
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.005)	-
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	-
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
12.	Chlorpyrifos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	-
14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-





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CIN - U74999JH2022PTC019583  
PAN - AAHCE3801M  
GST - 20AAHCE3801M12X

Accredited by -  
Jharkhand State Pollution Control Board  
Certified by -  
ISO 16046:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02782535051	Group	Water
Issue date/time	29.08.2025/ 18:24	Sub Group	Surface Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST -LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person  
Contact Number  
Email Id  
Order Date  
Order Number

Mr. Ankit Das  
+91 9971034775  
ankit.das@adityabirla.com  
05.04.2025/ 10:10  
RP/MJB/MM/25/0114/00

15.	Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
16.	Malathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
17.	Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	-
18.	Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
19.	Phorate	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
20.	DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
21.	Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	-

--Test result End--

### Prescribed Limit

### Operational Status

Analysed by - Pappu Kumar

Unit was Operational During sampling.



  
Reviewed by  
(P.K. Kumar)  
Technical Head

  
Issued by  
Gireesh Das  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





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CIN:-U74999JH2022PTC019683  
PAN:-AAHCE261M  
GST:-20AAHCE261M12X

Accredited by -  
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Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL02782535052	Group	Water
Issue date/time	29.08.2025/ 18:27	Sub Group	Surface Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Stage of Traceability Chain)

Customer Registration No.	EPIC/OTH/0278	Sample Booking Number	EPIC-2535052
Sample(s) Code	2535052	Sample Receipt (D/T)	25.08.2025/ 11:53

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	23.08.2025/ 12:25	Sampling End (D/T)	23.08.2025/ 12:36
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS - 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	25	Humidity %	70	Wind direction	40°-220°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Chourapari Village (Spring Water)	GPS coordinate	23° 20' 57.07" / 84° 17' 02.84"
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### Date(s) of performance of the laboratory activities

Test start date	25.08.2025/ 12:10	Test completion date	29.08.2025/ 16:30
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### --Test Result--

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	Total Coliform	IS 15185:2002	Per 100 ml	470	
2.	E.Coli	IS 15185:2002	Per 100 ml	350	

### --Test result End --

### Prescribed Limit

### Operational Status

Analysed by - Sujata Kamari

Unit was Operational During sampling.



Reviewed by  
(S.N. Kumar)  
Technical Head

Issued by  
(Sheel Saxi)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





# EPIC LabTech Private Limited



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93040 73994  
epiclabtech@gmail.com

CIN: U74999JH2022PTC019685  
PAN: AAHCE3010M  
GST: 20AAHCE3010M1Z4

Accredited by:-  
NABL, lab certificate number TC-12887  
Bharat State Resource Control Board  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018

TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000001073	Discipline	Chemical
Report Unique ID	RL02782535053	Group	Water
Issue date/time	29.08.2025/ 18:30	Sub Group	Surface Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST -LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0278	Sample Booking Number	EPIC-253S053
Sample(s) Code	2535053	Sample Receipt (D/T)	25.08.2025/ 11:54

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	23.08.2025/ 12:40	Sampling End (D/T)	23.08.2025/ 13:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	25	Humidity %	70	Wind direction	40°-220°
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### Sampling Location(s) with SPS coordinate(s)

S. Location A	Dhardhari Nadi (Up Stream)	GPS coordinate	23° 21' 08.93" / 84° 15' 58.99"
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### Date(s) of performance of the laboratory activities

Test start date	25.08.2025/ 12:10	Test completion date	29.08.2025/ 16:30
-----------------	-------------------	----------------------	-------------------

### -Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	6.5	-
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.89	-
3.	Colour	IS 3025 (P-04) 2021	Hazen	5	-
4.	Odour	IS 3025 (P-06) 2018	-	Agreeable	-
5.	Taste	IS 3025 (P-07) 2017	-	Agreeable	-
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	195.00	-
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	12.31	-
8.	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (P-23) 2019	mg/l	32.00	-
9.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21) 2009	mg/l	42.16	-
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	13.63	-
11.	Free Residual Chlorine	IS 3025 (P-26) 1988	mg/l	BDL (MDL-0.4)	-
12.	Sulphate (as SO <sub>4</sub> )	IS 3025 (P-24/Sec-1) 2022	mg/l	1.70	-
13.	Nitrate (as NO <sub>3</sub> )	APHA 4500 B 2023	mg/l	1.96	-
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL (MDL-0.001)	-
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	1.98	-





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CIN-U74999JH2022PTC019585  
PAN-AAHCE3617M  
GST-20AAHCE3617M1ZK

Accredited by -  
NABL with certificate number TC-12887  
Jharkhand State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000001073	Discipline	Chemical
Report Unique ID	RL02782535053	Group	Water
Issue date/time	29.08.2025/ 18:30	Sub Group	Surface Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST -LOHARDAGA, STATE -JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 SAUXITE MINE

Contact Person  
Contact Number  
Email Id  
Order Date  
Order Number

Mr. Ankit Das  
+91 9971034775  
ankit.das@adityabirda.com  
05.04.2025/ 10:10  
RP/MJB/MM/25/0114/00

### Group - Residues and Contaminants in Water,

### Sub Group - Trace Metals Elements

16. Copper (as Cu)	APHA 3111 B 2023	mg/l	BDL(MDL-0.2)	-
17. Iron (as Fe)	APHA 3111 B 2023	mg/l	BDL(MDL-0.1)	-
18. Lead (as Pb)	APHA 3111 B 2023	mg/l	BDL(MDL-0.01)	-
19. Cadmium (as Cd)	APHA 3111 B 2023	mg/l	BDL(MDL-0.003)	-
20. Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	BDL(MDL-0.05)	-
21. Nickel (as Ni)	APHA 3111 B 2023	mg/l	BDL(MDL-0.02)	-
22. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	-
23. Selenium (as Se)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	-
24. Manganese (as Mn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.09)	-
25. Zinc (as Zn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.04)	-

-Test result End -

Prescribed Limit  
Operational Status

Unit was Operational During sampling.

Analyzed by - Pappu Kumar

  
Reviewed by  
(G.N. Kumar)  
Technical Head

  
Issued by  
(Omesh Das)  
Laboratory Head



Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



Page 2 of 2

Disclaimer: The laboratory accepts responsibility for content of this report. The Test performed at laboratory's permanent facility at specific environmental condition as method required and results relate only to the sample tested in prescribed time & time. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law. Any complaint about this report should be communicated in writing within 10 days of its issue. Total liability of EPIC LabTech Pvt. Ltd. will be limited to limited amount only. All disputes are subjected to Ranchi Jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges. Opinion does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any claim by use or misuse of this report. When the results are from external provider are marked as "check".

Abbreviation: BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation)



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CIN - U74999JH2022PTC019685  
PAN - AAHCE3211M  
GST - 20AAHCE341M1Z8

Accredited by -  
Bharat State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 14001:2015

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02782535053	Group	Water
Issue date/time	29.08.2025/ 18:30	Sub Group	Surface Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST -LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0278	Sample Booking Number	EPIC-2535053
Sample(s) Code	2535053	Sample Receipt (D/T)	25.08.2025/ 11:54

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	23.08.2025/ 12:40	Sampling End (D/T)	23.08.2025/ 13:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	25	Humidity %	70	Wind direction	40°-220°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Dhardhari Nadi (Up Stream)	GPS coordinate	23° 21' 08.93" / 84° 15' 59.99"
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### Date(s) of performance of the laboratory activities

Test start date	25.08.2025/ 12:10	Test completion date	29.08.2025/ 16:30
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### --Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Fluoride (as F)	APHA 4500 F-C 2023	mg/l	BDL(MDL-0.1)	-
Group-Residues and Contaminants in Water				Sub Group-Trace Metals Elements	
2.	Aluminum	IS 3025 (P-55):2019	mg/l	BDL(MDL-0.1)	-
3.	Boron	IS 3025 (P-57):2021	mg/l	BDL(MDL-0.1)	-
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	-
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	-
Group-Residues and Contaminants in Water				Sub Group-Pesticides	
6.	Alachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
8.	Dieldrin	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	-
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.005)	-
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	-
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
12.	Chlorthaliphos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	-
14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-





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CIN:-U74999JH2022PTC019685  
PAN:-AAHCE3811M  
GST:-20AAHCE3811M1Z4

Accredited by:-  
Hazardous Waste Pollution Control Board  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018

## Analysis Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02762535053	Group	Water
Issue date/time	29.08.2025/ 16:30	Sub Group	Surface Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST -LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person  
Contact Number  
Email Id  
Order Date  
Order Number

Mr. Ankit Das  
+91 9971034775  
ankit.das@adityabirla.com  
05.04.2025/ 10:10  
RP/MJB/MM/25/0114/00

15. Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
16. Malathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	-
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
19. Phorate	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
20. DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	-

--Test result End--

Prescribed Limit  
Operational Status

Unit was Operational During sampling.

Analysed by - Pappu Kumar



  
Reviewed by  
(B.K. Kumar)  
Technical Head

  
Issued by  
(Anish Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand







# EPIC LabTech Private Limited

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CIN: U74999JH2022PTC018681  
PAN: AAHCE261M  
GST: 20AAHCE261M12X

Accredited by -  
Bharatm State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL02782535054	Group	Water
Issue date/time	29.08.2025/ 18:33	Sub Group	Surface Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST -LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0278	Sample Booking Number	EPIC-2S3S054
Sample(s) Code	2535054	Sample Receipt (D/T)	25.08.2025/ 11:54

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	23.08.2025/ 12:40	Sampling End (D/T)	23.08.2025/ 13:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	25	Humidity %	70	Wind direction	40°-220°
-------------------	--------	------------------	----	------------	----	----------------	----------

### Sampling Location(s) with GPS coordinate(s)

S. Location A	Dhardhari Nadi (Up Stream)	GPS coordinate	23° 21' 08.93" / 84° 15' 59.99"
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### Data(s) of performance of the laboratory activities

Test start date	25.08.2025/ 12:10	Test completion date	29.08.2025/ 16:30
-----------------	-------------------	----------------------	-------------------

### --Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Total Coliform	IS 15185:2002	Per 100 ml	490	
2.	E.Coli	IS 15185:2002	Per 100 ml	370	

### --Test result End --

### Prescribed Limit

#### Operational Status

Analyzed by -Sujata Kumari

Unit was Operational During sampling.

Reviewed by  
B.K. Kumar  
Technical Head

Issued by  
Ankit Das  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



# EPIC LabTech Private Limited

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CIN:-U74899JH2022PTC015865  
PAN:-AAHCE3013M  
GST:-20AAHCE3013M1EX

Accredited by:-  
NABL, with certificate Number TC-12887  
Jharkhand State Pollution Control Board  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018



## Analytical Test Certificate

Unique Lab Report No.	TC1288725000001074	Discipline	Chemical
Report Unique ID	RL02782535055	Group	Water
Issue date/time	29.08.2025/ 18:36	Sub Group	Surface Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person	Mr. Ankit Das
Contact Number	+91 9971034775
Email Id	ankit.das@edityabirra.com
Order Date	05.04.2025/ 10:10
Order Number	RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0278	Sample Booking Number	EPIC-2535055
Sample(s) Code	2535055	Sample Receipt (D/T)	25.08.2025/ 11:55

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	23.08.2025/ 13:10	Sampling End (D/T)	23.08.2025/ 13:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	25	Humidity %	70	Wind direction	40°-220°
-------------------	--------	------------------	----	------------	----	----------------	----------

### Sampling Location(s) with GPS coordinate(s)

S. Location A	Dhardhat Nadi (Down Stream)	GPS coordinate	23° 20' 54.92" / 84° 18' 06.63"
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### Date(s) of performance of the laboratory activities

Test start date	25.08.2025/ 12:10	Test completion date	29.08.2025/ 16:30
-----------------	-------------------	----------------------	-------------------

### -Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	6.73	-
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.09	-
3.	Colour	IS 3025 (P-04) 2021	Hazen	5	-
4.	Odour	IS 3025 (P-05) 2018	-	Agreeable	-
5.	Taste	IS 3025 (P-07) 2017	-	Agreeable	-
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	205.00	-
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	12.81	-
8.	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (P-23) 2019	mg/l	32.00	-
9.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21) 2009	mg/l	42.16	-
10.	Calcium (as Ca)	IS 3025 (P-40) 1981	mg/l	12.83	-
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	BDL(MDL-0.4)	-
12.	Sulphate (as SO <sub>4</sub> )	IS 3025 (P-34/Sec-1) 2022	mg/l	1.70	-
13.	Nitrate (as NO <sub>3</sub> )	APHA 4500 B 2023	mg/l	1.98	-
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL(MDL-0.001)	-
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	2.46	-





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CIN:-U74999JH2022PTC019683  
PAN:-AAHCE3611M  
GST:-25AAHCE3611M1ZK

Accredited by:-  
NABL, with certificate number TC-12887  
The State Quality Promotion Council, Ranchi  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018

TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000001074	Discipline	Chemical
Report Unique ID	RL02762535055	Group	Water
Issue date/time	29.08.2025/ 18:36	Sub Group	Surface Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST -LOHARDAGA, STATE -JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person  
Contact Number  
Email Id  
Order Date  
Order Number

Mr. Ankit Das  
+91 9971034775  
ankit.das@adityabirla.com  
05.04.2025/ 10:10  
RP/MJB/MM/25/0114/00

### Group - Residues and Contaminants in Water,

### Sub Group - Trace Metals Elements

16. Copper (as Cu)	APHA 3111 B 2023	mg/l	BDL(MDL-0.2)	-
17. Iron (as Fe)	APHA 3111 B 2023	mg/l	BDL(MDL-0.1)	-
18. Lead (as Pb)	APHA 3111 B 2023	mg/l	BDL(MDL-0.01)	-
19. Cadmium (as Cd)	APHA 3111 B 2023	mg/l	BDL(MDL-0.003)	-
20. Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	BDL(MDL-0.05)	-
21. Nickel (as Ni)	APHA 3111 B 2023	mg/l	BDL(MDL-0.02)	-
22. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	-
23. Selenium (as Se)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	-
24. Manganese (as Mn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.09)	-
25. Zinc (as Zn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.04)	-

-Test result End -

Prescribed Limit  
Operational Status

Unit was Operational During sampling.

Analysed by - Pappu Kumar

Reviewed by  
(S.K. Kumar)  
Technical Head

Issued by  
(Anish Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



Page 2 of 2

**Disclaimer:** 1. The laboratory accepts responsibility for content of this report. 2. Test performed at laboratory's permanent facility, at specific environmental conditions as method required and results relate only to the sample tested in prescribed time & time. 3. This Test report shall not be reproduced full or in part & can't be used as proof in the court of law. 4. Any complaint about this report should be communicated in writing within 30 days of its issue. 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to incurred amount only. 6. All disputes are subjected to Ranchi Jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges. 7. Opinion does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any liability by use or misuse of this report. 8. Where the results are from external provider are marked as "refer".

**Abbreviation:** BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantification).





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CIN:-U74999JH2022PTC016685  
PAN:-AAHCE3801M  
GST:-25AAHCE3801M1Z8

Accredited by:-  
Bharat State Pollution Control Board  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02782535055	Group	Water
Issue date/time	29.08.2025/ 18:36	Sub Group	Surface Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0278	Sample Booking Number	EPIC-2535055
Sample(s) Code	2535055	Sample Receipt (D/T)	25.08.2025/ 11:55

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	23.08.2025/ 13:10	Sampling End (D/T)	23.08.2025/ 13:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS: 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	25	Humidity %	70	Wind direction	40°-220°
-------------------	--------	------------------	----	------------	----	----------------	----------

### Sampling Location(s) with GPS coordinate(s)

S. Location A	Dhardhari Nadi (Down Stream)	GPS coordinate	23° 20' 54.92" / 84° 16' 06.63"
---------------	------------------------------	----------------	---------------------------------

### Date(s) of performance of the laboratory activities

Test start date	25.08.2025/ 12:10	Test completion date	29.08.2025/ 16:30
-----------------	-------------------	----------------------	-------------------

### --Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Fluoride (as F)	APHA 4500 F-C 2023	mg/l	BDL(MDL-0.1)	-
Group-Residues and Contaminants in Water				Sub Group-Trace Metals Elements	
2.	Aluminum	IS 3025 (P-55):2019	mg/l	BDL(MDL-0.1)	-
3.	Boron	IS 3025 (P-57):2021	mg/l	BDL(MDL-0.1)	-
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	-
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.00)	-
Group-Residues and Contaminants in Water				Sub Group-Pesticides	
6.	Alachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
8.	Dieldrin	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	-
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.005)	-
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	-
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
12.	Chlorpyrifos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	-
14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-



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CIN-U74399JH2022PTC019685  
PAN-AAHCE341M  
GST-22AAHCE3401M1Z3

Accredited by:-  
Pawitric State Pollution Control Board  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02782535055	Group	Water
Issue date/time	29.08.2025/ 18:36	Sub Group	Surface Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST -LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person  
Contact Number  
Email Id  
Order Date  
Order Number

Mr. Ankit Das  
+91 9971034775  
ankit.das@adityabirla.com  
05.04.2025/ 10:10  
RP/MJB/MM/25/0114/00

15. Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
16. Malathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	-
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
19. Phorate	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
20. DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	-

--Test result End--

Prescribed Limit  
Operational Status

Unit was Operational During sampling.

Analysed by - Poppi Kumar



  
Reviewed by  
(E.K. Kumar)  
Technical Head

  
Issued By  
(Anish Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



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**Abbreviation:** BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation).





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✉ epiclabtech@gmail.com

CIN:-U74999JH2022PTC019683  
PAN:-AARCE3019M  
GST:-20AAHCE3019M1ZK

Accredited by :-  
Bharat Heavy Water Pollution Control Board  
Certified by :-  
ISO 9001:2015 and ISO 45001:2018

## Analysis Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL02782535056	Group	Water
Issue date/time	29.08.2025/ 18:39	Sub Group	Surface Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODHI 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0278	Sample Booking Number	EPIC-2535056
Sample(s) Code	2535056	Sample Receipt (D/T)	25.08.2025/ 11:55

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	23.08.2025/ 13:10	Sampling End (D/T)	23.08.2025/ 13:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	25	Humidity %	70	Wind direction	40°-220°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Dhardhari Nadi (Down Stream)	GPS coordinate	23° 20' 54.92" / 84° 16' 06.63"
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### Date(s) of performance of the laboratory activities

Test start date	25.08.2025/ 12:10	Test completion date	29.08.2025/ 16:30
-----------------	-------------------	----------------------	-------------------

-Test Result-					
Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Total Coliform	IS 15185 2002	Per 100 ml	430	
2.	E.Coli	IS 15185 2002	Per 100 ml	240	

### -Test result End -

### Prescribed Limit

### Operational Status

Analysed by - Sujata Kamari

Unit was Operational During sampling.



  
Reviewed by  
(R.K. Kumar)  
Technical Head

  
Issued by  
(Dr. Shikha)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





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✉ epiclabtech@gmail.com

CIN:-U74999JH2022PTC019685  
PAN:-AAHCE3811M  
GST:-20AAHCE3811M1Z8

Accredited by:-  
NABL, with certificate number TC-12887  
Jharkhand State Pollution Control Board  
Certified for:-  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000001075	Discipline	Chemical
Report Unique ID	RL02782535057	Group	Pollution & Environment
Issue date/time	29.08.2025/ 18:41	Sub Group	Waste Water (Effluent)

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0278	Sample Booking Number	EPIC-2535057
Sample(s) Code	2535057	Sample Receipt (D/T)	25.08.2025/ 11:56

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	23.08.2025/ 12:10	Sampling End (D/T)	23.08.2025/ 12:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	25	Humidity %	70	Wind direction	40°-220°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Work Shop (Outlet)	GPS coordinate	23° 21' 16.96" / 84° 17' 18.73"
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### Date(s) of performance of the laboratory activities

Test start date	25.08.2025/ 12:25	Test completion date	29.08.2025/ 17:00
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### -Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	6.7	6.5-8.5
2.	BOD (3 days at 27°C)	IS 3025 (P-44) 2000	mg/l	14.00	-
3.	COD	IS 3025 (P-58) 2000	mg/l	68.00	150
4.	Oil & Grease	IS 3025 (P-39) 2021	mg/l	BDL(MDL-04)	10.0
5.	Total Suspended Solid	IS 3025 (P-17) 2022	mg/l	45.00	50
6.	Phosphate	IS 3025 (P-31/Sec-1) 2022	mg/l	0.58	-
7.	Zinc	APHA 3111 B 2023	mg/l	BDL(MDL-0.04)	-

### -Test result End -

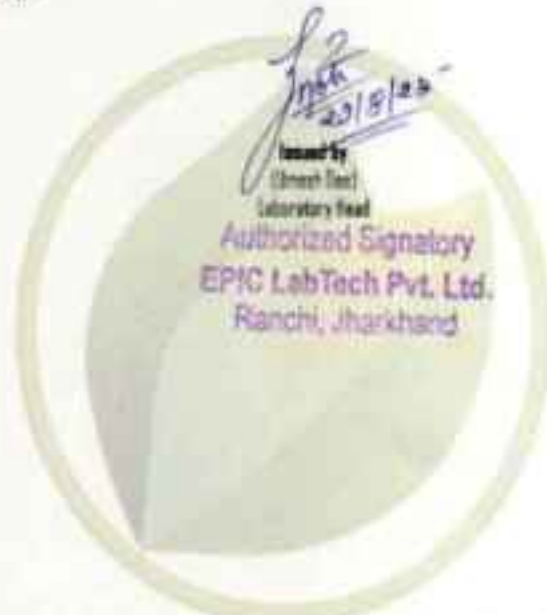
Prescribed Limit Environmental (Protection) Rules-1986, Schedule I, Serial No-114.

Operational Status Unit was Operational During sampling.

Analysed by - Pappu Kumar



*Pappu Kumar*  
Reviewed by  
(S.R. Kumar)  
Technical Head





# EPIC LabTech Private Limited

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✉ epiclabtech@gmail.com

CIN:-U14809JH2022PTC019685  
PAN:-AAHCE3013M  
GST:-20AAHCE3013M1ZK

Accredited by:-  
Jharkhand State Pollution Control Board  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02762535057	Group	Pollution & Environment
Issue date/time	29.08.2025/ 18:41	Sub Group	Waste Water (Effluent)

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST -LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@edityabirra.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0278	Sample Booking Number	EPIC-2535057
Sample(s) Code	2535057	Sample Receipt (D/T)	25.08.2025/ 11:56

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	23.08.2025/ 12:10	Sampling End (D/T)	23.08.2025/ 12:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	25	Humidity %	70	Wind direction	40°-220°
-------------------	--------	------------------	----	------------	----	----------------	----------

### Sampling Location(s) with GPS coordinate(s)

S. Location A	Work Shop (Outlet)	GPS coordinate	23° 21' 16.96" / 84° 17' 18.73"
---------------	--------------------	----------------	---------------------------------

### Date(s) of performance of the laboratory activities

Test start date	25.08.2025/ 12:25	Test completion date	29.08.2025/ 17:00
-----------------	-------------------	----------------------	-------------------

### -Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Total Dissolve Solids (TDS)	IS 3025 (P-16) 2023	mg/l	161.0	-

### -Test result End -

Prescribed Limit Environmental (Protection) Rules-1986, Schedule I, Serial No-114.

Operational Status Unit was Operational During sampling.

Analysed by - Pappu Kumar



*P. Kumar*  
Reviewed by  
(P.K. Kumar)  
Technical Head

*Pratik*  
29/08/25  
Issued by  
(Pratik Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand







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✉ epiclabtech@gmail.com

CIN:-U74999JH2022PTC019683  
PAN:-AAHCE3815M  
GST:-20AAHCE3811M1Z8

Accredited by:-  
NABL, with certificate number TC-13501  
for Quality Management Control System  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018

TC-12887

## Analysis Test Certificate

Unique Lab Report No.	TC1288725000001250	Discipline	Chemical
Report Unique ID	RL03062538058	Group	Atmospheric Pollution
Issue date/time	22-09-2025/18:17	Sub Group	Ambient Air Quality

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Stage of Traceability Dated)

Customer Registration No.	EPIC/OTH/0306	Sample Booking Number	EPIC-2538058
Sample(s) Code	2538058 (A) (B) (C) (D)	Sample Receipt (D/T)	18.09.2025/ 11:14

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/038
Sampling Start (D/T)	16.09.2025/ 12:03	Sampling End (D/T)	17.09.2025/ 09:11
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	Humidity %	67	Wind direction	40°-220°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Site (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 20' 32.13" / 84° 17' 29.11"
S. Location B	Weigh Bridge (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 21' 08.52" / 84° 17' 21.05"
S. Location C	Mine Office (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 21' 10.37" / 84° 17' 15.52"
S. Location D	Entrance Gate (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 21' 30.01" / 84° 17' 27.14"

### Date(s) of performance of the laboratory activities

Test start date	18.09.2025/ 11:34	Test completion date	22.09.2025/ 13:00
-----------------	-------------------	----------------------	-------------------

### -Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS-5182 (P-23) 2022	µg/m³	58.91	60.86	55.96	57.96	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS 5182 (P-24) 2018	µg/m³	27.35	28.29	26.33	24.38	60 (24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS-5182 (P-62) 2023	µg/m³	07.11	0848	06.11	07.11	80 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 (P-06) 2022	µg/m³	17.67	21.81	19.70	21.74	80 (24 hr)
5.	Ammonia (NH <sub>3</sub> )	IS 5182 (P-25) 2018	µg/m³	24.75	25.92	25.04	26.50	400 (24 hr)
6.	Ozone (O <sub>3</sub> )	IS-5182 (P-09) 2019	µg/m³	19.51	17.85	18.51	18.84	180 (1 hr)
7.	Lead (Pb)	IS-5182 (P-22) 2019	µg/m³	BDL	BDL	BDL	BDL	1.0 (24 hr)
				(MDL 0.1)	(MDL 0.1)	(MDL 0.1)	(MDL 0.1)	
8.	Nickel (Ni)	IS-5182 (P-26) 2020	ng/m³	BDL	BDL	BDL	BDL	-
				(MDL 0.1)	(MDL 0.1)	(MDL 0.1)	(MDL 0.1)	
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m³	BDL	BDL	BDL	BDL	-
				(MDL 0.001)	(MDL 0.001)	(MDL 0.001)	(MDL 0.001)	

### -Test Results End -

Prescribed Limit Environmental (Protection) Rules-1986, Schedule VII.  
Operational Status Unit was Operational During sampling.  
Analysed by - Vishal Mangaraj



Reviewed by  
(E.K. Kumar)  
Technical Head

Issue by  
(Ankit Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.





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C/o - R.K. Tripathi, Indrapuri,  
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Jharkhand - 834005, India

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✉ epiclabtech@gmail.com

CIN:- U74999JH2022PTC019685

PAN:- AANCE3611M

GST:- 29AAHCE3611M1ZX

Accredited by:-

Jharkhand State Pollution Control Board

Certified by:-

ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03062538058	Group	Atmospheric Pollution
Issue date/time	22-09-2025/18:17	Sub Group	Ambient Air Quality

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE- COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adityabirla.com  
Order Date 31.03.2025/ 10:10  
Order Number 13612313868

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0306	Sample Booking Number	EPIC-2538058
Sample(s) Code	2538058 (A) (B) (C) (D)	Sample Receipt (D/T)	18.09.2025/ 11:14

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	16.09.2025/ 12:03	Sampling End (D/T)	17.09.2025/ 09:11
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	Humidity %	67	Wind direction	40°-220°
-------------------	--------	------------------	----	------------	----	----------------	----------

### Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Site (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 20' 32.13" / 84° 17' 29.11"
S. Location B	Weigh Bridge (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 21' 08.52" / 84° 17' 21.05"
S. Location C	Mine Office (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 21' 10.37" / 84° 17' 15.52"
S. Location D	Entrance Gate (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 21' 30.01" / 84° 17' 27.14"

### Data(s) of performance of the laboratory activities

Test start date	18.09.2025/ 11:34	Test completion date	22.09.2025/ 13:00
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### -Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C <sub>6</sub> H <sub>6</sub> )	IS 5182(P-11) 2006	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS 5182(P-12) 2004	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01/00	mg/m <sup>3</sup>	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

### -Test Results End-

Prescribed Limit Environmental (Protection) Rules-1986, Schedule VII.

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



*[Signature]*  
Reviewed by  
(B.R. Kumar)  
Technical Head







# EPIC LabTech Private Limited



Address:-  
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📞 98357 86677

📞 93049 12994

📧 epiclabtech@gmail.com

CIN-U74999JH2022PTC019485

PAN-AAHCE3611M

GST-20AAHCE3611ML2X

Accredited by:-  
NABL with certificate number TC-1361  
Jharkhand State National Control Board  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018

TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000001248	Discipline	Chemical
Report Unique ID	RL03062538056	Group	Water
Issue date/time	20-09-2025/18:11	Sub Group	Surface Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person	Mr. Ankit Das
Contact Number	+919971034775
Email Id	ankit.das@adityabirla.com
Order Date	05.04.2025/ 10:10
Order Number	RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Data)

Customer Registration No.	EPIC/OTH/0306	Sample Booking Number	EPIC-2538056
Sample(s) Code	2538056	Sample Receipt (D/T)	18.09.2025/ 11:13

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	16.09.2025/ 15:40	Sampling End (D/T)	16.09.2025/ 15:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	Humidity %	67	Wind direction	40°-220°
-------------------	--------	------------------	----	------------	----	----------------	----------

### Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Site (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 20' 29.85" / 84° 17' 27.46"
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### Date(s) of performance of the laboratory activities

Test start date	16.09.2025/ 11:33	Test completion date	22.09.2025/ 12:55
-----------------	-------------------	----------------------	-------------------

### --Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25°C	IS 3025 (P-11) 2023	-	6.72	-
2.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	17.00	-
3.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	9.21	-

### Group - Residues and Contaminants in Water,

### Sub Group - Trace Metals Elements

4.	Iron (as Fe)	APHA 3111 B 2023	-	BDL(MDL-0.1)	-
----	--------------	------------------	---	--------------	---

### --Test result End--

Prescribed Limit IS 10500:2021  
Operational Status Unit was Operational During sampling  
Analysed by - Pappu Kumar

Reviewed by  
(S.K. Kumar)  
Technical Head





# EPIC LabTech Private Limited

Address:-  
C/o - R.N. Tripathi, Indraprastha,  
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Phone:- 0651 4445352  
98357 86677  
93049 72094  
epiclabtech@gmail.com

CIN:-U74999JH2022PTC019685  
PAN:-AARCE3613M  
GST:-21AAHCE3611M1ZK  
Accredited by:-  
Bharat State Pollution Control Board  
Certified by:-  
ISO 9001:2015 and ISO 42001:2015

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03062538056	Group	Water
Issue date/time	22-09-2025/18:11	Sub Group	Surface Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MIB/MM/25/0114/00

### References of Quality Management System (Scope of Traceability Data)

Customer Registration No.	EPIC/OTH/0306	Sample Booking Number	EPIC-2538056
Sample(s) Code	2538056	Sample Receipt (D/T)	18.09.2025/ 11:13

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	16.09.2025/ 15:40	Sampling End (D/T)	16.09.2025/ 15:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	Humidity %	67	Wind direction	40°-220°
-------------------	--------	------------------	----	------------	----	----------------	----------

### Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Site (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 20' 29.85" N 84° 17' 27.46" E
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### Date(s) of performance of the laboratory activities

Test start date	18.09.2025/ 11:33	Test completion date	22.09.2025/ 12:55
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### --Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Dissolve Oxygen (DO)	IS 3025 (P-38) 1989	mg/l	4.3	-
2.	Temperature	IS 3025 (P-09)1986	°C	25.5	-
3.	BOD (3days at 27°C)	IS 3025 (P-44) 2000	mg/l	1.3	-
4.	COD	IS 3025 (P-58) 2006	mg/l	40.0	-
5.	Total Suspended Solids (TSS)	IS 3025 (P-17) 2022	mg/l	15.00	-
6.	Oil & Grease	IS 3025 (P38) 2021	mg/l	BOLIMDL-04)	-

### Group - Residues and Contaminants in Water,

7.	Aluminum (as Al)	IS 3025 (P-55) 2003	-
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### Sub Group - Trace Metals Elements

BOLIMDL-0.1)

### --Test result End --

Prescribed Limit IS 10500:2021  
Operational Status Unit was Operational During sampling.  
Analysed by - Pappu Kumar



Reviewed by  
(B.K. Kumar)  
Technical Head







# EPIC LabTech Private Limited



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CIN:-U74999(JH2022PTC019685)  
PAN:-AAHCE3611M  
GST:-20AAHCE3611M1ZK

Accredited by:-  
NABL, vide certificate number TC-11381  
Participated in Proficiency Control Scheme  
Certified by:-  
ISO 15189:2013 and ISO 45001:2018

TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000001249	Discipline	Chemical
Report Unique ID	RL03062538057	Group	Pollution & Environment
Issue date/time	22-09-2025/18:14	Sub Group	Soil/Sediments

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AHIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +919871034775  
Email Id ankit.das@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0306	Sample Booking Number	EPIC-2538057
Sample(s) Code	2538057	Sample Receipt (D/T)	18.09.2025/ 11:13

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	16.09.2025/ 16:15	Sampling End (D/T)	16.09.2025/ 16:25
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	EPIC/LAB/SOP/PE/01/00		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	Humidity %	67	Wind direction	40°-220°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Site (Ahtipani Chirodi Bauxite Mine)	GPS coordinate	23° 20' 29.19" / 84° 17' 25.90"
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### Date(s) of performance of the laboratory activities

Test start date	18.09.2025/ 12:00	Test completion date	22.09.2025/ 13:00
-----------------	-------------------	----------------------	-------------------

### --Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25.7°C	MAGI 2011	-	6.43	-
2.	Available Phosphorus	MAGI 2011	Kg/ha	9.00	-
3.	Available Potassium	MAGI 2011	Kg/ha	112.30	-
4.	Organic Carbon	MAGI 2011	%	0.99	-
5.	Electrical Conductivity	MAGI 2011	µs/cm	83.33	-
6.	Magnesium	MAGI 2011	mg/kg	19.54	-
7.	Nitrogen	MAGI 2011	%	0.099	-
8.	Arsenic (as As)	USEPA 3050 B 1996	mg/kg	BDL(MDL-0.005)	-
9.	Cadmium (as Cd)	USEPA 3050 B 1996	mg/kg	0.97	-
10.	Selenium (as Se)	USEPA 3050 B 1996	mg/kg	BDL(MDL-0.006)	-

### --Test result End--

Operational Status Unit was Operational During sampling.

Analysed by - Ishika Singh



*[Signature]*  
Reviewed by  
(R.K. Kumar)  
Technical Head

*[Signature]*  
Issued by  
(Girish Das)  
Laboratory Head  
Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



# EPIC LabTech Private Limited

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✉ epiclabtech@gmail.com

CIN - U74999/JH2022PTC019685  
PAN - AAACE3813M  
GST - 22AAHCE3811M12X

Accredited by -  
Jharkhand State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RLD3062538057	Group	Pollution & Environment
Issue date/time	22-09-2025/18:14	Sub Group	Soil/Sediments

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: AMTIPANI CHIRODIH 130.01 BAUXITE MINE

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0306	Sample Booking Number	EPIC-2538057
Sample(s) Code	2538057	Sample Receipt (D/T)	18.09.2025/ 11:13

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	16.09.2025/ 16:15	Sampling End (D/T)	16.09.2025/ 16:25
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	EPIC/LAB/SOP/PE/01/00		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	Humidity %	67	Wind direction	40°-220°
-------------------	--------	------------------	----	------------	----	----------------	----------

### Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Site (Amtipani Chirodi Bauxite Mine)	GPS coordinate	23° 20' 29.19" / 84° 17' 25.90"
---------------	---	----------------	---------------------------------

### Date(s) of performance of the laboratory activities

Test start date	18.09.2025/ 12:00	Test completion date	22.09.2025/ 13:00
-----------------	-------------------	----------------------	-------------------

### -Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Chloride (as Cl)	EPIC/LAB/SOP/PE/01/00	g/l	0.041	-
2.	Mercury (as Hg)	USEPA 3050 B 1096	mg/kg	BDL(MDL-0.005)	-

### -Test result End -

### Operational Status

Unit was Operational During sampling.

Analysed by - Ishika Singh



Reviewed by  
(S.N. Kumar)  
Technical Head

Assured by  
(Suresh Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



# MINERALS & MINERALS LIMITED

Regd. Office- Court Road, P.O. & Distt.-Lohardaga, Jharkhand-835302

Tel.-06526-223163

CIN NO. U26990JH1970PLC000875

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Ref. :

Date .....

## **Annexure 3**

Date – 01.11.2025

### **Office Order**

Environmental Cell has been re-constituted for Amtipani Chirodih Bauxite Mine (Area – 130.01 Ha) Comprising below mentioned team members. The team will ensure compliance with the Environment Acts, Rules & Regulations in respect of the said mines of Minerals & Minerals Limited.

1. Mr. Pradeep Kumar (Coordinator)
2. Mr. Amit Pradhan (Geologist)
3. Mr. Girija Tamrakar (Environment Engineer)
4. Mr. Anand Prakash Tiwari (Environment Engineer)

The Undersigned is the in charge of above Environment Management Cell constituted for the purpose of ensuring compliances of environmental acts, rules and regulations for the above mines.



Basudev Gangopadhyay  
AVP (Planning, Environment & Compliance)

## Annexure 4

Production, Mined Out, Back Filled and Over Burden removal from April 2025 to September 2025								
S No	Name of the Mines	Mining lease area (ha)	Production Capacity (MT)*	Lease Period*	Production (MT)	Mined out area (ha)	Backfilled area (ha)	Over burden (Cu.M)
1	Bagru Bauxite Mine	75.41	85000	22.01.1974 to 31.03.2030	NIL	NIL	NIL	NIL
2	Bhusar Bauxite Mine	65.31	280000	11.07.1981 to 31.03.2030	79390	0.21	0.45	87427.68
3	Hisri (New) Bauxite Mine	14.55	100000	19.07.1981 to 31.03.2030	41829	0.11	0.23	13246.30
4	Pakhar (8.09) Bauxite Mine	8.09	80000	16.05.1973 to 31.03.2030	NIL	NIL	NIL	NIL
5	Pakhar (35.12) Bauxite Mine	35.12	200000	17.04.1975 to 31.03.2030	NIL	NIL	NIL	NIL
6	Pakhar (115.13) Bauxite Mine	115.13	300000	19.07.1996 to 31.03.2030	124975	1.58	0.50	153576.56
7	Sherangdag-A Bauxite Mine	155.81	260000	16.10.1974 to 31.03.2030	500	0.03	0.01	0.00
8	Serangdag-B Bauxite Mine	77.89	100000	04.10.1978 to 31.03.2030	57100	2.01	1.60	70755.24
9	Jalim & Sanai Bauxite Mine	12.14	50000	16.10.1974 to 31.03.2030	8547	0.13	0.10	8842.10
10	Gurdari Bauxite Mine	584.19	325000	23.03.1985 to 22.03.2035	94470	4.30	3.31	125642.99
11	Kujam - I Bauxite Mine	80.87	150000	13.03.2006 to 12.03.2056	NIL	NIL	NIL	NIL
12	Kujam - II Bauxite Mine	157.38	300000	24.03.2006 to 23.03.2056	63140	1.67	0.51	56988.56
13	Amtipani Bauxite Mine	190.95	150000	13.03.2006 to 12.03.2056	93765	3.168	1.21	209999.64



**Annexure 4**

<b>Minerals &amp; Minerals Limited</b>								
14	Pakhar (109.507) Bauxite Mine	109.507	280000	26.07.2008 to 25.07.2058	100280	1.630	0.72	175833.99
15	Pakhar (15.58) Bauxite Mine	15.58	60000	28.04.1965 to 31.03.2030	NIL	NIL	NIL	NIL
16	Bimarla Bauxite Mine	134.526	300000	18.07.2009 to 17.07.2059	77100	0.849	0.30	62788.97
17	Amtipani Chirodih Bauxite Mine	130.01	450000	11.01.2017 to 10.01.2067	157400	5.320	4.600	218030.43

\*Static information about the mines included in the above table



**Basudev Gangopadhyay**  
**AVP (Planning, Environment and Compliance)**

## Annexure-5

### **BREAK UP THE COST OF ENVIRONMENTAL MEASURES DURING THE YEAR 2025-26**

The composite cost during the year 2025-26 for environmental protection & pollution control by Jharkhand Mines division of M/s Hindalco Industries Ltd & M/s Minerals & Minerals Ltd for implementation of the suggested measures in EC at our all the operating mines in the state of Jharkhand-namely Bagru (75.41 ha), Hisri New (14.55 ha), Bhusar (65.31 ha), Pakhar (115.13 ha), Pakhars (109.507 ha), Pakhar (15.58 ha), Pakhar (8.09 ha), Pakhar (35.12 ha), Sherangdag (155.81 ha), Serangdag (77.89 ha), Jalim & Sanai (12.14 ha), Bimarla Bauxite Mines (134.526 ha), Gurdari (584.19 ha), Amtipani (190.95 ha), Kujam I (80.87 ha) Kujam II (157.38 ha), and Amtipani Chirodih (130.01 ha) Bauxite mines.

S. No	Description	Budget (in Rupees) FY 2025-26 (From Apr'25 to Sep'25)	Actual (in Rupees) FY 2025-26 (From Apr'25 to Sep'25)
1	Pollution Control and Environmental Monitoring	1,71,00,000	59,45,184
2	Reclamation/ Back filing & Rehabilitation**	2,04,00,000	1,19,00,000
3	Green belt, Plantation & Water sprinkling arrangement	1,20,00,000	42,73,045
4	Rural Development	7,92,00,000	2,59,84,599

\*\*Part of OB removed cost



Basudev Gangopadhyay  
AVP (Planning, Environment & Compliance)



## REPORT OF MEDICAL EXAMINATION UNDER RULE 29 B

(TO BE ISSUED IN TRIPLICATE)\*\*

Certificate No: AMP CH 001679

Certified that ABHAY MUNDA employed as HYWA OPERATOR in Amtipani chirodhi bauxatile mines, Form-b No. 272  
 has been examined for an Initial medical examination. He appears to be 27 years of age.  
 The findings of the examining authority are given in the attached sheet. It is considered that ABHAY MUNDA

- ✓ a. Is medically fit for any employment in mines.
- ✗ b. Is suffering from \_\_\_\_\_ and is medically unfit for  
 (i) Any employment in mines, or  
 (ii) Any employment below ground, or  
 (iii) Any employment or work \_\_\_\_\_
- ✗ c. Is suffering from \_\_\_\_\_ and should get this disability \*cured/controlled and should be again  
 examined within a period of \_\_\_\_\_ months. ## appear for re-examination with the result  
 of test of \_\_\_\_\_ and the opinion c \_\_\_\_\_  
 specialist from \_\_\_\_\_ #REF! may be permitted/not permitted to carry on  
 his duties during this period.



Place Rajendra Hospital, Lohardaga  
 Date 04/03/2025

\*Delete whatever not applicable.

\*\*One copy of the certificate shall be handed over to the person concerned and another copy shall be sent to the Manager of the mine concerned by registered post and the third copy shall be retained by the examining authority.

*[Signature]*  
 signature of the examining authority  
 Name and designation in Block Letter  
 Dr. Omprakash Dubay  
 CONSULTANT  
 Reg. No- 33297, BR-2002  
 Hindalco Mines Divi., Lohardaga  
 Reg. No- 33297, BR-2002

**FORM "O"**

(See Rule 29 F(2) and 29L)

**REPORT OF MEDICAL EXAMINATION UNDER RULE 29 B**

(TO BE ISSUED IN TRIPLICATE)\*\*

Certificate No: AMP CH 00180

Certified that SHIVCHARAN ORAON employed as MECHANIC (HEMM) in Antipani chirodhi bauxite mines, Form-b No. 273  
 has been examined for an Initial medical examination. He appears to be 30 years of age.  
 The findings of the examining authority are given in the attached sheet. It is considered that SHIVCHARAN ORAON

- ✓ a. Is medically fit for any employment in mines.
- ✗ b. Is suffering from \_\_\_\_\_ and is medically unfit for  
 (i) Any employment in mines, or  
 (ii) Any employment below ground, or  
 (iii) Any employment or work \_\_\_\_\_
- ✗ c. Is suffering from \_\_\_\_\_ and should get this disability \*cured/controlled and should be again  
 examined within a period of \_\_\_\_\_ months. ## appear for re-examination with the result  
 of test of \_\_\_\_\_ and the opinion c \_\_\_\_\_  
 specialist from \_\_\_\_\_ #REF! may be permitted/not permitted to carry on  
 his duties during this period.



**Dr. Omprakash Dubey**  
**Sr. Consultant**  
**Hindalco Mines Divi., Lohardaga**  
**Reg. No- 33297, BR-2002**

Signature of the examining authority  
 Name and designation in Block Letter

**DR. OMPRAKASH DUBEY**  
**CONSULTANT**  
**Reg-No-33297, BR-2002**  
**Dr. Omprakash Dubey**  
**Sr. Consultant**

**Hindalco Mines Divi., Lohardaga**  
**Reg. No- 33297, BR-2002**

Place Rajendra Hospital, Lohardaga  
 Date 04/03/2025

\*Delete whatever not applicable.

\*\*One copy of the certificate shall be handed over to the person concerned and another copy shall be sent to the Manager of the mine concerned by registered post and the third copy shall be retained by the examining authority.



**Date/Time** MicL at 12:47:28 June 10, 2025  
**Trigger Source** Geo: 0.500 mm/s, Mic: 2.000 pa.(L)  
**Range** Geo: 254.0 mm/s  
**Record Time** 3.0 sec (Auto=3Sec) at 1024 sps  
**Operator/Setup:** Operator/Q AMTIPNI.MMB

**Serial Number** UM17407 V 10-90FB Micromate ISEE  
**Battery Level** 3.8 Volts  
**Unit Calibration** April 1, 2025 by UES New Delhi  
**File Name** \_\_TEMP.EVT

## Notes

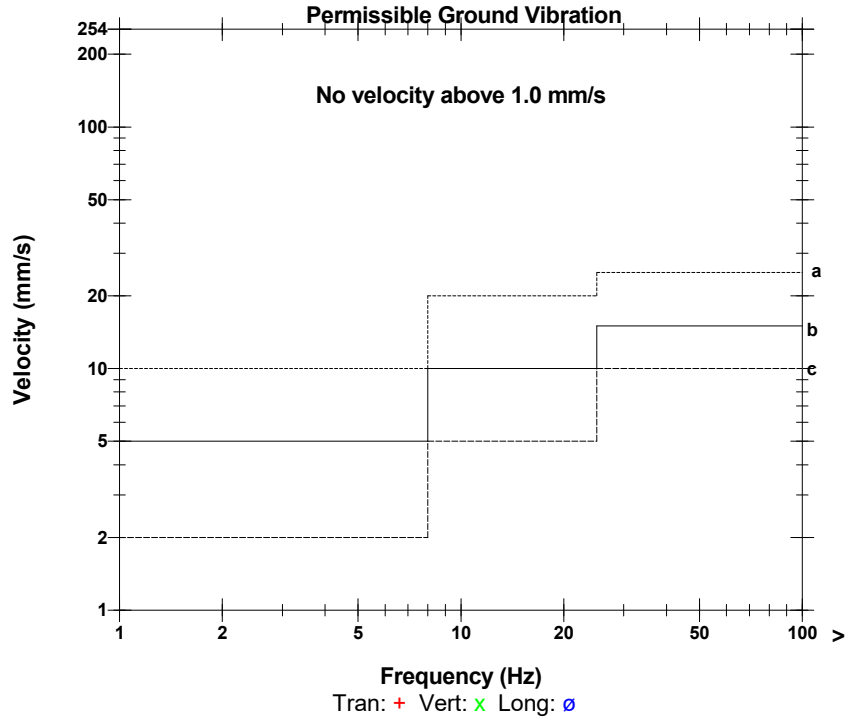
**Location:** AMTIPANI CHIRODIH BAUXITE MINES  
**Client:**  
**User Name:** MINERALS & MINERALS LTD  
**General:**

**Microphone** Linear Weighting  
**PSPL** 2.048 pa.(L) at 0.000 sec  
**ZC Freq** 23 Hz  
**Channel Test** Passed (Freq = 19.7 Hz Amp = 1131 mv )

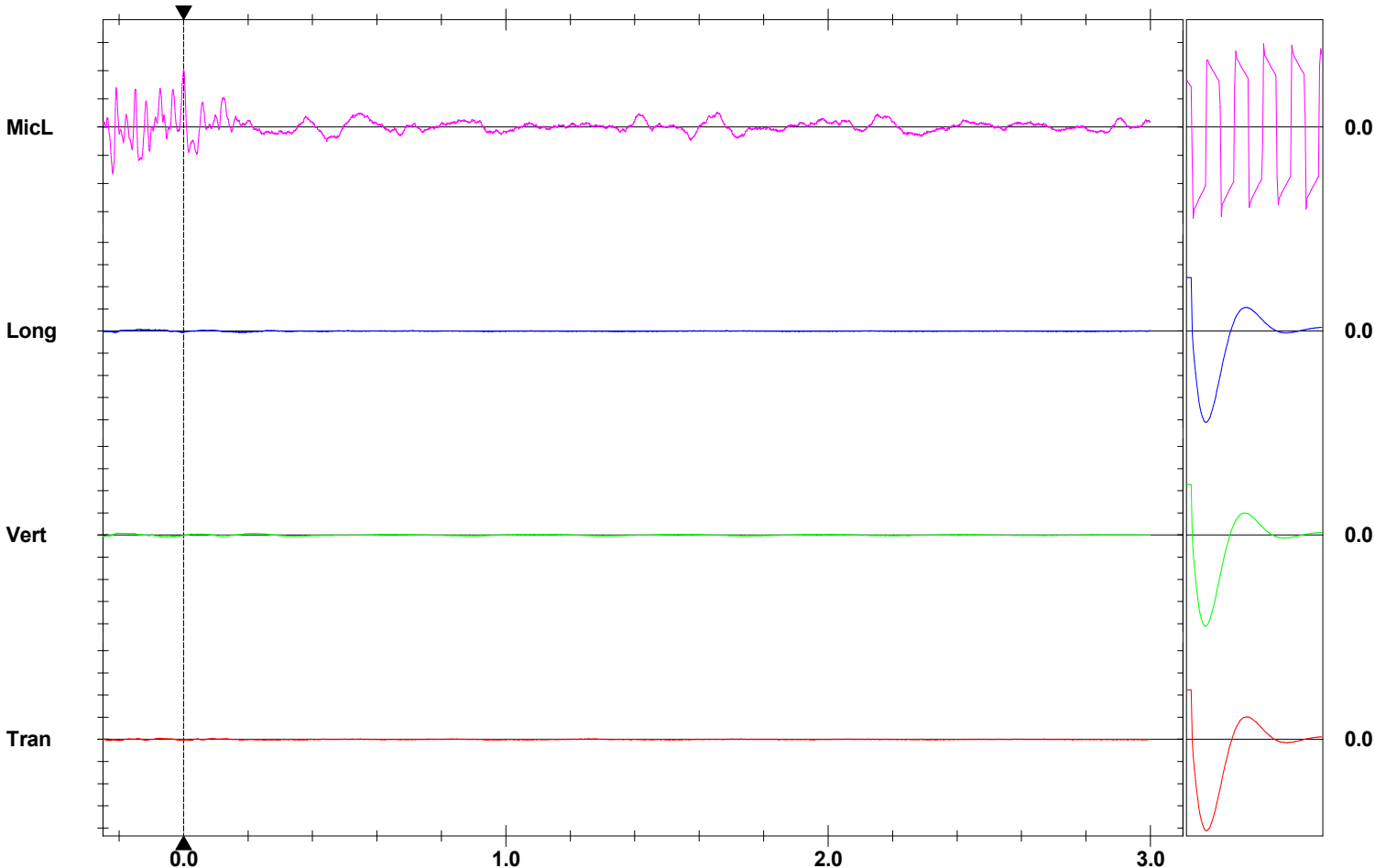
	Tran	Vert	Long	
PPV	0.102	0.181	0.158	mm/s
ZC Freq	8.3	5.1	3.2	Hz
Time (Rel. to Trig)	-0.231	-0.046	-0.143	sec
Peak Acceleration	0.006	0.005	0.006	g
Peak Displacement	0.002	0.005	0.007	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.1	7.5	7.3	Hz
Overswing Ratio	4.1	4.2	3.9	

**Peak Vector Sum** 0.213 mm/s at -0.206 sec

## DGMS India (A)



- a) Industrial Buildings
- b) Domestic houses/structures
- c) Historic objects, sensitive structures



**MINERALS & MINERALS LIMITED**

Regd. Office- Court Road, P.O. &amp; Distt.-Lohardaga, Jharkhand-835302

Tel.-06526-223163

CIN NO. U26990JH1970PLC000875

Ref. :

Date .....


दिनांक - 16.09.2021

**मिनरल्स एण्ड मिनरल्स लिमिटेड**  
**अमतीपानी-चिरोडीह बॉक्साईट माइंस**

महाशय/महाशया,

आपको यह सूचित किया जाता है कि अमतीपानी-चिरोडीह बॉक्साईट माइंस (130.01 हे0) को पर्यावरण स्वीकृति (E.C.) प्रदान किया गया है। उसका प्रतिलिपि इस सूचना के साथ संलग्न किया जा रहा है।

आपके सूचना के लिए प्रेरित।

 पाया  
15.2.022

प्रधान कार्याकारी अध्यक्ष  
ग्राम पंचायत अमतीपानी  
प्रखण्ड-विशुनपुर, जिला-गुमना  
(झारखण्ड)।



खान प्रबंधक

(अमतीपानी बॉक्साईट माइंस)



# MINERALS & MINERALS LIMITED

Regd. Office- Court Road, P.O. & Distt.-Lohardaga, Jharkhand-835302

Tel.-06526-223163

CIN NO. U26990JH1970PLC000875

Ref. :

Date .....


दिनांक - 16.09.2021

## मिनरल्स एण्ड मिनरल्स लिमिटेड अमतीपानी-चिरोडीह बॉक्साईट माइंस

महाशय/महाशया,

आपको यह सूचित किया जाता है कि अमतीपानी-चिरोडीह बॉक्साईट माइंस (130.01 हे०) को पर्यावरण स्वीकृति (E.C.) प्रदान किया गया है। उसका प्रतिलिपि इस सूचना के साथ संलग्न किया जा रहा है।

आपके सूचना के लिए प्रेरित।

 पाया



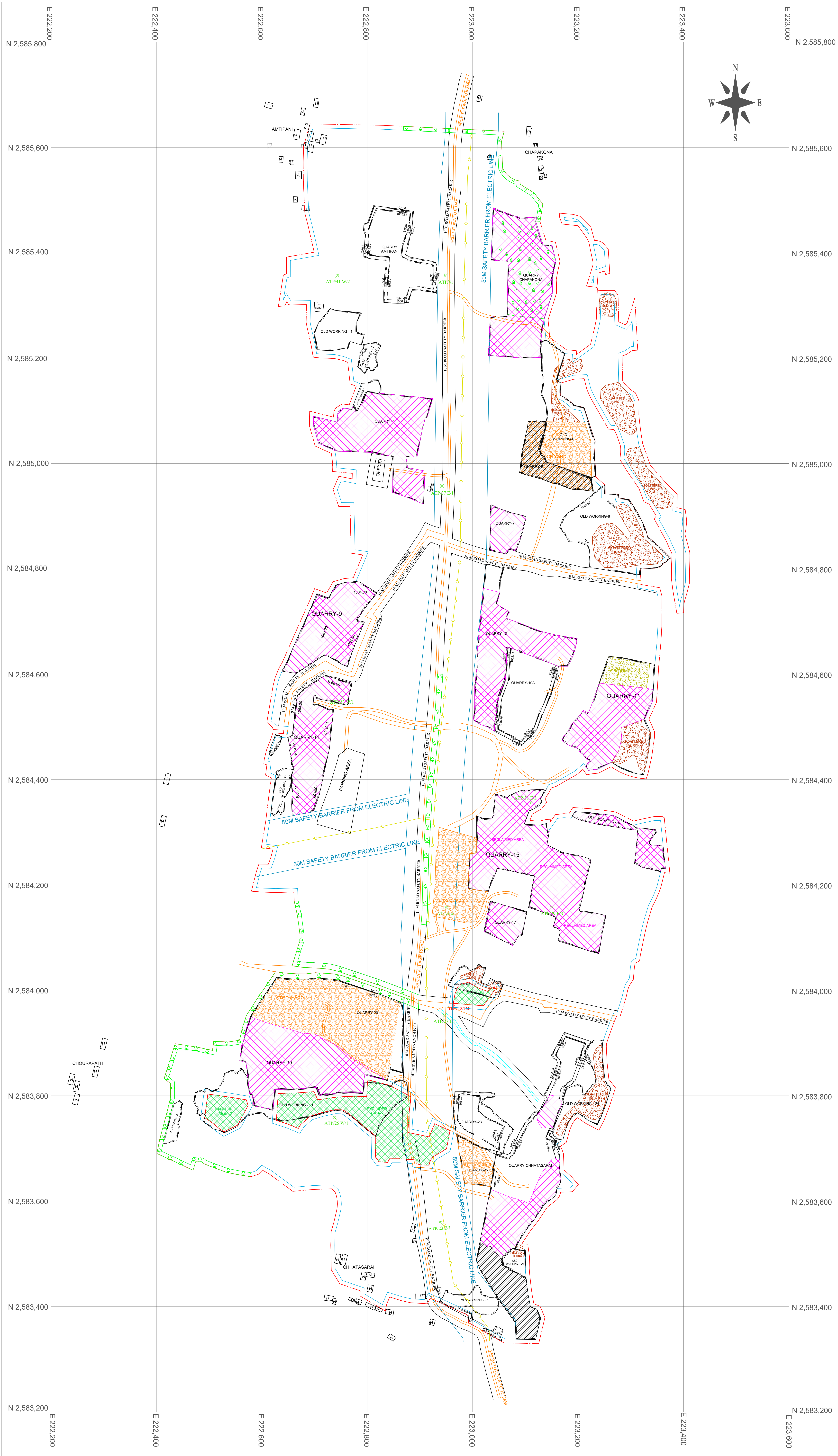
यंकारी अध्यक्ष  
म प०- चिरोडीह



खान प्रबंधक

(अमतीपानी बॉक्साईट माइंस)





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AMTIPANI CHIRODIH BAUXITE MINE

IN VILLAGE - AMTIPANI CHIRODIH AND BAHANGARH,  
THANA - BISHUNPUR DISTRICT, GUMLA, JHARKHAND.

LEASE AREA - 130.01 HECTS.

LESSEE - M/s MINERALS & MINERALS LIMITED

SURFACE PLAN

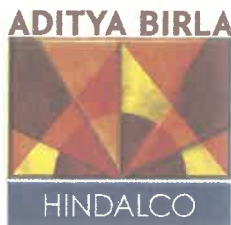
SCALE 1:2000

PLATE NO - 03

CERTIFIED THAT THE PLAN IS PREPARED BASED ON THE  
DGPS MAP AUTHENTICATED BY THE STATE GOVT. AND  
THE PLAN IS CORRECT.

Mines SurveyorMines Manager





Ref: HIL/JH/DFO-GUMLA/WLCP Fees/85

Date: 30.05.2025

To,  
Divisional Forest Officer,  
Gumla, Jharkhand

**Sub:** Payment of Rs. 126.13 Lakhs (Rupees One Hundred Twenty-Six Lakhs and Thirteen Thousand Only) towards Wildlife Conservation Plan fees as per sanctioned order by PCCF, Wildlife, Ranchi for our all-bauxite mines of Hindalco Industries Limited and Minerals & Minerals Limited in Gumla Forest Division, Jharkhand.

**Ref:** (i) Your Letter no. 1256 dated 17.04.2025 (ii) Your Letter no. 1257 dated 17.04.2025  
(iii) Your Letter no. 1258 dated 17.04.2025 (iv) Your Letter no. 1259 dated 17.04.2025  
(v) Your Letter no. 1260 dated 17.04.2025 (vi) Your Letter no. 1261 dated 17.04.2025

Dear Sir,

The Wildlife Conservation Plans for following Bauxite mines of Hindalco Industries Ltd and Minerals & Minerals Limited have been approved by PCCF, Wildlife, Ranchi. Subsequently, we have received the demand note from your good office as per the allocated fund mentioned in the sanctioned/approved documents.

As per the demand note received from your good office, a total amount of an amount of **Rs. 126.13 Lakhs (Rupees One Hundred Twenty-Six Lakhs and Thirteen Thousand Only)** has to be paid to the Divisional Forest Officer, Gumla as per the sanctioned budget mentioned in the approved report according to the EC condition.

Therefore, we are submitting six demand drafts **Rs. 126.13 Lakhs (Rupees One Hundred Twenty-Six Lakhs and Thirteen Thousand Only)** against the Wildlife Conservation Plan for the following bauxite mines of Hindalco Industries Ltd. and Minerals & Minerals Limited. The details of the bank drafts are as follows:

S. No.	Your reference letter dated	Amount in Demand note	Mining Project	Demand Draft (DD) In Favour of	Amount (Rs)	DD No. dated
1	1256 dated 17.04.2025	57.32 Lakhs	Gurdari (584.19 Ha), Amtipani (190.95 Ha)	Divisional Forest Officer, Gumla	57.32 Lakhs	567181 dated 29.05.2025
2	1259 dated 17.04.2025	12.91 Lakhs	Shrengdag (155.81 Ha), Serengdag (140.07 Ha), Jalim & Sanai (12.14 Ha)		12.91 Lakhs	567176 dated 26.05.2025
3	1260 dated 17.04.2025	4.20 Lakhs			4.20 Lakhs	567175 dated 26.05.2025
4	1261 dated 17.04.2025	1.10 Lakhs	Amtipani Chirodih (130.01 Ha)		1.10 Lakhs	642373 dated 29.05.2025
5	1257 dated 17.04.2025	48.20 Lakhs	Bimarla (134.526 Ha)		48.20 Lakhs	642372 dated 29.05.2025
6	1258 dated 17.04.2025	2.40 Lakhs			2.40 Lakhs	642371 dated 29.05.2025
Total		126.13 Lakhs	-		126.13 Lakhs	-

Please acknowledge the receipt.

Thanking You,  
Sincerely Yours,

(Basudev Gangopadhyay)  
AVP (Planning, Environment & Compliance)

Encl: As above

#### Hindalco Industries Limited

Mines Division, Court Road, Lohardaga 835302, Jharkhand, India | T: +91 6526 223163  
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T: +91 22 66626666/626105555 | F: +91 22 62610400/62610500  
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W: www.hindalco.com | E: hilinvestors@adityabirla.com